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Mr. Frank Lloyd Wright, Royal Gold Medallist, 1941 An informal picture taken during his visit to England in 1939

CONTENTS

The President's New Year Message

The year 1941 may well prove to be one of the most momentous in the history of the British people.

May I send a message of goodwill and good cheer to all members of the R.I.B.A. who, as citizens and architects, are helping in the national effort.

In the fighting services, in home defence, in the work of succour to the homeless, and in its own sphere, the profession is playing a great part in the war. After the war an equally important work in the design and rebuilding of devastated areas must be the architect's duty.

Our powers of endurance and our courage may have further severer tests, but these will be met with unshaken confidence until the day when peace is declared.

"*Come what, come may, time and the hour runs through the roughest day.*"

W. H. ANSELL, *President*

The Royal Gold Medal

As most members will be aware by the time they receive this JOURNAL, the Royal Gold Medal for 1941 has been awarded by the King to Mr. Frank Lloyd Wright on the recommendation of the R.I.B.A. On receipt of the President's message conveying news of the award Mr. Wright cabled to the Royal Institute saying: "*You propose a great honour. I accept, gratified that during this terrific war England can think of honouring an architect. A culture like that can never lose.—Frank Lloyd Wright.*" It is hardly necessary to remind British architects so soon after Mr. Wright's visit to England of his outstanding place in architecture to-day and of the place he has assured for himself for ever. This award is our testimony.

Alexander Woolcott, the famous American author, has written of him: "I think that no one in the modern world has brought to architecture so good a mind, so leaping an imagination or so fresh a sense of beauty. Indeed, if the niggardly publisher of this book ('While Rome Burns') were so to ration me that I was suffered to apply the word 'genius' to only one living American, I would have to save it up for Frank Lloyd Wright."

As a pioneer of modern architecture his buildings and the ideas underlying his work have had an incalculable influence on architectural thought and practice throughout the world. For many years his influence was less in his own country than in Germany and Holland; nevertheless, a characteristic feature of his work, and the one which he has been most eager to emphasise, is its essential American quality. He developed and extended the line of American modernism, which originated with H. H. Richardson and his own master, Louis Sullivan. "I felt sure," he said in the first of the Sulgrave Manor Board lectures that he gave at the R.I.B.A. in 1939, "that architecture which was really architecture proceeded from the ground, and that the terrain, the native industrial conditions, the nature of materials and the purpose of the building, must inevitably determine the form and character of any good building."*

* *An Organic Architecture: the Architecture of Democracy.* Lund Humphries, 1939. 7s. 6d.

Lloyd Wright was born in Wisconsin, his father a Baptist clergyman, his mother the daughter of a Welsh Unitarian. After training as an engineer in Wisconsin University, he worked first in the office of J. L. Silsbee. His first building, in 1887, was the *Hillside School* for two of his aunts, pioneer progressive educationists; in the same year he entered the office of Adler and Louis Sullivan, where immediately he achieved a place of importance as a designer, and prospered sufficiently to build a house for himself, his second building, in 1888.

During the next decades he developed in Illinois his first characteristic style known as "Prairie Architecture," low-lying buildings with strongly developed horizontals and deep overhanging eaves. His "Prairie Architecture" reached its climax with the *Robie House* of 1908 and his own first house at Taliesin in Wisconsin, where he founded a settlement which still continues under his direction as an architectural school and as a vigorous centre of his influence. Another important house of this period was the *Coonley House* of 1908.

Already in these early designs Wright made what is probably his greatest contribution to the development of modern architecture in evolving the "open plan," which since then has become one of the most significant and enduring characteristics of advanced contemporary design.

This open planning in which solid structural sub-divisions are reduced so that rooms merge into each other and into the open air arose out of Wright's quick response to the conditions of modern life which he was enabled to express through the brilliant use of new forms of construction. In 1904 he built his first important office building, the *Larkin Building* in Chicago.

In 1910 and 1911 signs of his growing influence in Europe were shown by the publication of books on his work in Germany, one of which was introduced by Mr. C. R. Ashbee, a leader of the most progressive English architecture of the day, the first Englishman publicly to acknowledge Wright's outstanding abilities.

During the 1914-18 war Wright built the *Imperial Hotel* in Tokyo and profited permanently from the influence on his work of Japanese architecture. In the hotel he used an unorthodox system of construction which, at first, derided by critics, proved to be so brilliantly adapted to its special site conditions that the hotel was the only building of its size that survived the Tokyo earthquake unharmed.

Back in America after the war, Wright passed through the period of his career of least achievement, though despite neglect and lack of opportunity he continued to develop his ideas and built several important houses, including the *Millard House* of 1921, the best known of his pre-cast concrete-block houses, in which an all-over richness of surface design and emphasis of wall was combined with essential simplicity of form. His brilliant conception of the open plan was developed and adapted to this new phase of his architecture.

In about 1930 he entered on the present great period of his career. The work he has done in the last decade equals anything in his previous years, and now in his seventy-first year he retains the vitality and inventiveness and the constantly alert technical competence of a young man.

Outstanding buildings of recent years include *Falling Water*, near Pittsburg, spectacularly built over a waterfall; a group of experimental low-cost houses, called the *Ardmore Experiment;* the *Jacob House*, and his largest industrial building, a large administrative block for the *S.C. Johnson Company*, Racine, Wisconsin, which incorporates some of Wright's most original and progressive structural designing. In Arizona the members of his "Taliesin Fellowship" have built with their own hands a desert camp, a group of gaily coloured stone and timber buildings which show the infinite adaptability of his genius to fresh country and conditions.

In recent years he has developed his town planning ideas and has planned *Broadacres City*, a new form of city community consisting almost entirely of small-holding estates, symptomatic of the "back to the land" ideas which are threaded through all Wright's recent work.

THE RESERVATION OF ARCHITECTS

It will be remembered that at the outbreak of war architects were reserved at the age of 25. Some little time later the age was raised to 30 on the recommendation of the Architecture and Public Utilities Committee of the Ministry of Labour. Shortly after, without reference to this Committee, architects were removed from the schedule of reserved occupations altogether, but on representations being made by the Committee were put back again within seven days. Again without reference to the Committee further changes were made in the schedule in that a new class of "pupil architects" was introduced and reserved at the age of 25 and architectural draughtsmen were reserved from the age of 21. Further representations were made by the Architecture and Public Utilities Committee and these changes were cancelled, all architects being reserved from the age of 30.

However, at the end of 1939 architects were removed from the schedule altogether and were thus free to enlist in any of the armed forces if they so desired.

Shortly after the heavy bombing of London started there was a sudden and large demand for the services of architects and architectural assistants to assist Government Departments, local authorities and private clients in the survey and repair of war damage, etc., and it soon became apparent that the demand greatly exceeded the supply. On 30 September the President of the R.I.B.A. wrote to the Minister of Labour urging that all architects and architectural assistants over the age of 33 should be at once reserved. The matter was then referred to the Architecture and Public Utilities Committee and the latter, at a meeting on 5 November, passed a unanimous resolution confirming the request of the President and recommending that all architects should be reserved from the age of 33. It should perhaps be explained that the Committee contains representatives of the R.I.B.A. and other architectural bodies, the Chartered Surveyors' Institution, the Auctioneers' and Estate Agents' Institute and the various Government Departments which employ architects in either a private or salaried capacity, as well as representatives of the Treasury and Ministry of Labour and National Service.

A considered memorandum was prepared setting forth the reasons for the Committee's unanimous recommendation and this was submitted to the Government Committee which is responsible for the schedule of reserved occupations.

It has just been learned from the Chairman of the Architecture and Public Utilities Committee that the unanimous recommendation of the Committee has been rejected. A further meeting of the Committee will be held at an early date and it is the intention of the R.I.B.A. to do everything in its power to secure the reconsideration of this decision, in which action they know that they will have the support and co-operation of the other professional bodies and Government Departments represented on the Committee.

It is, of course, unnecessary to set forth here the reasons for the Committee's recommendation in favour of reservation which were sent to the Government Committee. These will be obvious to every architect.

IAN MACALISTER,
Secretary R.I.B.A.

23 December 1940.

PLANNING AGAINST NOISE*

A Summary of Acoustics

By HOPE BAGENAL

Acoustics first influences planning and second presents technical data, materials, formulæ. On the technical side, like other modern subjects, it is always developing, changing; and theories, once rigidly held, are liable in a few years to be altered. But there is a precipitation of real knowledge; and as new buildings test themselves over years it is possible, by honestly comparing theory with practical results, to build up the kind of body of information that architects need. In the following summary the needs of post-war building are kept in mind.

1. Planning and Segregation

Modern buildings must protect against noise as well as against rain and cold. This will modify planning in the direction of the grouping of units, and the segregation of noise sources. Structural insulation, after years of investigation, has yielded many secrets, but remains technically difficult and expensive. It is cheaper on unconfined sites to conquer noise by segregation and separation. Intelligent planning can always reduce the extent of noise problems. Fitzmaurice and Allen, in the opening paragraph of *Sound Transmission in Building*†, say: "It is very much open to question whether it would be possible to contrive structural insulation adequate to compensate for serious deficiencies in planning and in any event considerable additional cost would be entailed." First in importance come residential buildings because they involve living conditions. If a block of workmen's dwellings solved on paper all the most rigorous economic problems, but made sleep impossible, it would be useless; this could easily happen. Hospitals, schools, colleges, hotels, come next; then council chambers, committee rooms; then business buildings where telephoning is necessary; then assembly halls, theatres, music rooms. Also, looking ahead, we must envisage more of a type such as the "community centre" and village college where many separate activities go on at the same time. Add to these the frequency to-day of temporary structures for schools, camps and hospitals, all of which can be planned for less rather than more noise.

In the R.I.B.A. *Alternative Problems in Design* there are subjects which can be taken as special acoustic subjects, but *all subjects ought to be planned to avoid noise communication* through structure, through adjoining doors and opposite windows, just as measures are taken to provide adequate lighting. Thus it is bad planning to put library or committee rooms over a games room on an unconfined site and encounter the expense and uncertainty of structural sound-proofing, when it can be avoided.

2. Site Values and Noise

Traffic is much noisier on a hill and at cross roads where gear changing is frequent. Examples are the principal thoroughfares of the cities of Winchester and Norwich. Many motor vehicles comply with noise regulations on top gear but are very noisy on low gears. Motor buses are noisy at points adjoining stopping places where they change gear. This means that some sites are unsuited for some buildings. Council chambers, school class-rooms, law courts, ought not to be planned on the noisy front. Committee rooms in town halls and county halls always suffer from being planned convertible into assembly rooms and placed on main front. A laboratory may be rendered useless if galvanometers and other sensitive instruments cannot be read owing to vibration. Also sites quiet at the time of purchase may become noisy owing to restrictions in adjoining areas. Sometimes heavy night traffic finds a shorter route through a quiet residential area and destroys amenities. Therefore if a choice occurs architects and surveyors will do well to warn their clients. Also local authorities must bear in mind that traffic regulations in one area may have serious results on adjoining areas.

The night worker who must try to sleep by day needs consideration, in hostels, in nurses' homes, in working-class flats, and a range of comparatively quiet rooms screened from traffic ought to be envisaged. Rooms in the mansard with a parapet in front of windows are noticeably quieter than rooms having windows just under cornice or projecting balconies.

3. Planning of Pipe Shafts

In modern buildings the domestic services are so extensive and ramified that their planning on confined sites is now a major problem. Pipes, trunks, ducts, conduits, special services, are potential sources of noise because they are liable to penetrate floors, walls, partitions. It is still common in practice to find an expensive soundproof partition rendered useless by a service pipe breaking through it. Therefore pipe shafts must be well placed and ample in size; they are as important as staircases. Similarly on section, horizontal duct-ways must be envisaged, or else sufficient thickness for a double floor or slung ceiling, in order to enable leads to reach points laterally without cutting through floors and partitions. Also space for an ample air inlet shaft must be provided to prevent high air speeds and consequent structural vibration. (For notes on air conditioning planning see Hotels, section 9).

4. Planning of Flats

The noise sources in order of nuisance in flats are wireless sets, slamming of doors, footsteps overhead, intermittent traffic, refuse bins, lifts and staircases, plumbing, boiler room noises. Noise insulation is fundamental to flat design and is not merely incidental. Nowadays we must think of flat plus wireless set. Blocks are best planned L shaped or extended and not on enclosed courts which serve as noise containers. Three-sided blocks or Z shaped blocks can give varied aspects so that bedrooms can be planned on the quiet side. *A vital principle is to plan bedroom against bedroom on the party partition*, and not bedroom against the living room with its wireless set. This is an example where planning can halve the risk. Flats can be dissociated by staircases or by baffle lobbies between pairs. The closer and more cell-like, and the cheaper and thinner the structure, the more *internecine* become the internal noises. This is unavoidable. Regard tiled kitchen, bathroom, w.c., living room, as noise sources but able to mask intruding noises, and plan them in column, each over each. The too ingenious plan which sandwiches a bedroom between living rooms above and below, or brings a w.c. over a living room, is asking for trouble. Equally important is providing ample space for shafts to take the services, as noted above. Close carpeting in the lease is highly desirable.

The complete structural sound-proofing of flats can be studied in Fitzmaurice and Allen's recent book quoted above, and every student ought to note its contents. It will be seen that the noise sources are grouped, namely, staircases, lift, pipe shafts, kitchen, bathrooms and w.c.s. Then the structural insulation is expended

* This is the first of two articles which Mr. Bagenal has written for the JOURNAL as a summary of present acoustic knowledge and practice largely in order to assist students and architects who have been deprived of access to the normal text books. The articles are not, however, réchauffées of previously published information, but contain many hitherto unpublished results of Mr. Bagenal's own studies.

The second article will appear in March.

† D.S.I.R., H.M.S.O. 1939. 4s.

upon living room, bedrooms, corridor and entrance. That insulation is thorough, and each room is a separate box structure resting on a floating floor.

Since efficient structural soundproofing involves floating floors and double partitions it is obvious that strength of structure calculated to carry only 4 in. floors and 2 in. single partitions is insufficient. In other words efficient soundproofing means stronger structure and some small extra in total height to allow for floor thicknesses. The thicker the partition the less will they vibrate to the shutting of distant doors.

5. Bed-Sitting Room Flats

Blocks of flats of this kind, giving proper living conditions at small rents to students, hospital nurses, school teachers, professional people, etc., are urgently needed but present some difficulties. Each bedroom is also a living room and neighbours' wireless sets, on both sides, may prevent sleep. Also bathrooms are often a source of noise in the late and early hours. Also, in summer, noise comes through open adjoining windows. The principles to go upon are best illustrated in reference to a plan of Miss M. E. Lloyd illustrated in *Fig. 1*. Miss Lloyd has made a

Fig. 1

special study of the type both practically by living therein, and also theoretically. The points can be summarised as follows :—

1. Cupboards as baffles between bed-sitting rooms.
2. Windows shielded from each other by recessing to avoid the passage of sound through adjoining windows.
3. Bathroom baffled by a shaft from adjoining flat.
4. Bed separated from corridor noises by own bathroom.
5. Floors to be close carpeted in the lease.
6. Quiet refuse disposal by means as follows : Kitchen next corridor with dustbin cupboard cleared daily in fibre bins removed on rubber-wheeled trolley.

Miss Lloyd urges that the living room portion be not less than 17 ft. by 16 ft. and bedroom portion not less than 6 ft. by 12 ft. The lifts to be in separate brick shafts disconnected from structural floors, and both staircases and lifts trapped by lobbies and doors from corridor. The corridor to be preferably an open access balcony, not enclosed ; and finally silent latches and locks on all doors.

It must be noted that the *star-shaped plan* giving acute angles between the various arms brings windows of the inner rooms closely opposite each other with corresponding noise and lack of privacy : also that traffic noise collected by the arms is noticeably intensified at these inner windows.

6. Socio-Acoustics of Working-Class Flats

In England, as in other countries, working-class families with few children can adapt themselves to flat life where nearness to work and other inducements exist. *The job of the designer is to see that living conditions are not in fact impaired.* There are two vital problems—the child and the night worker. The flat ought to be a *home*.* Therefore babies and young children must be envisaged and they need to sleep for an hour or two by day and not cause too much noise to neighbours at ordinary times. And in the same flat, often, there is the night worker, a lodger, trying to sleep. Yet the noise problem must be seen in its stringent relationships. Where low rents depend on cheap building, extra expense must eventually take away from proper expenditure on food. Yet *better quality homes for workers would pay for themselves after a term of years.*

The menace of bed bugs makes it imperative to have structure which will not move slightly and cause cracks in finishing materials. Therefore partitions ought to weigh at least 40 lbs. per square foot. An advantage in the ordinary four-floor block without lifts is that brick party walls, and also brick partition walls, can be carried up from foundations and solid structure ensured.

In *the planning of working-class flats* it is equally important not to put living-room against bedroom on the party wall. Avoid small courts and wells which act as noise containers. Also the type of three bedroom or " maisonette " plan which gives two floors to a flat, and therefore inevitably has the bedroom of one flat under the living-room of another is thoroughly bad from the noise point of view unless soundproof floors giving defence against impact noises can be afforded. Also the principal bedrooms ought to be planned away from access balconies.

Far the most difficult noise problem is that of floors owing to impact noises. The Departmental Committee of the Ministry of Health in their *Final Report on Construction of Flats for the Working Classes* 1937 recommend a standard minimum of defence for party walls between flats of " an 8½ in. wall plastered both sides (about 50 phons) or its equivalent " (a 9 in. wall is meant). For floors the Report does not make *recommendation*, recognising that floors involve impact noises and hence technical difficulties and expense (" A well insulated floor will probably be prohibitive in cost," p. 32), but the Report makes some *suggestions*. Apart from " flanking effects " the floor which might be regarded as a standard " is one which gives, for blows corresponding to heavy footfalls, a degree of quietness about 15 to 20 phons superior to a bare concrete floor (p. 3). Also insulation gains, over the bare concrete, of less than 10 to 15 phons are not considered worth the expense : and on the other hand a gain of 25 to 30 phons " is very acceptable " and can be obtained with a ' floating floor " finish in conjunction with an insulated ceiling," (p. 55). The floors suggested as suitable for working-class flats are noted below in section 14. In my own opinion since cheap structural floors are almost useless against footsteps a gain of 8 to 10 phons is worth while. An extra thickness of structural floor will not of itself increase its efficiency except in so far as it increases rigidity of total structure, and it is often found in practice that owing to thin floors it is not possible to carry the soundproofing elements. The problem is acute because in workmen's flats the close carpeting of rooms, as part of the tenant's agreement, is not desirable. But some cushioning finish to a floor is a help, but it must be reasonably hygienic. A thick linoleum laid in a mastic on the cement screeding is hygienic and is less noisy against small impacts than a jointless composition floor or a wood block floor. At the same time defence against bugs must be insisted on and the danger of cracks must be avoided. Some recent practical tests have shown that the problem can be tackled by allocating some extra cost for a floating floor under living room and principal bedroom in each flat. An extra four inches in the total thickness dimension of the floor for first, second, third and fourth floors is then necessary and will slightly increase the total cube of the building.

Lifts in working-class flats are controversial, yet are likely to increase in localities where tenants can educate their children in their use. A lift can serve as many as 60 flats and still be an

* Vacuee experience seems to reinforce the argument against flats. London working people with children, who come out of flats, express a deep longing for the houses with backyards they once occupied.

amenity of real value. To quote from "Housing Manager" writing in the *Phœnix* for December 1937 :

"The inspection and maintenance service, with certain safety devices, renders the lifts as safe as it is humanly possible to make them. Their misuse is not dangerous to life or limb, but merely wasteful of current. Every tenant who wishes for one is given a latch key which will only open the outer lift door when the lift is at that floor, to which it has been summoned by a push button. It is self-operative in the usual automatic way. Children under sixteen are not allowed the use of this key, and it is liable to be forfeited if found in their possession ; they are, of course, allowed to enter with their parents. At first, with the ingenuity and resource which is, apparently, born into London children, they found their way in unfailingly by fair means or foul. . . . After a month or two this particular game was, however, more or less abandoned. . . ."

"The legitimate use of the lifts by the lame, the old, those with weak hearts, and those who are short of breath, as well as by tired mothers coping with a baby and a heavy shopping bag, entirely justifies, we consider, their installation, where it can be done at an additional cost of not more than 4d. to 6d. a week per flat. To achieve this, or an even lower cost, is a matter of constructional planning, and would appear to involve the use of continuous approach balconies so that a sufficient number of flats may be served by the same lift."

I have quoted these highly practical paragraphs because they give data to a designer. But most important of all is the paragraph :

"We have found it advisable to turn off the current at 9 o'clock in the evening, by which time even the latest Saturday evening shopper should have returned, and also on Sunday afternoon, so that the banging of the lift doors shall not disturb the rest of the adjoining tenants."

This latter precaution is owing to the inevitable noise made by cheap lift equipment.

Also it must be pointed out that the proper planning of lift shafts in dissociated brick structure can greatly reduce noise risk : while the planning of lift motors at the top of shafts in a thin frame structure, without headroom in the motor room to float the lift motor, may greatly increase the risk.

Quiet door stops to hall doors in working-class flats, the avoiding of ball catches to cupboard doors on party partitions, and quiet electric switches, are quite as important for working-class as for middle-class flats on account of the sleeping by day of night workers. And for exactly the same reason, quiet vacuum cleaners and fibre refuse bins are greatly to be preferred.

7. Private Houses

The new building estates after the war will consist largely of small houses in groups and there must be at least a minimum of defence against noise. In such houses, or in the semi-detached kind, the main problem is the neighbour's piano or loud-speaker at the other side of the party wall ; and in summer, noise coming through open adjoining windows. There are three defensive measures, contributory, and all worth carrying out.

First, separate structure at the party wall. It has been shown in speculative house building that a two-leaf party wall, without wall ties, and stiffened by the fireplace jambs, can be both effective and reasonable in cost. By this means an increase in noise reduction of some 10 phons over a single party wall can be provided which is well worth while.* The leaves ought to be a narrower 4½ in. brick leaf separated by at least 2 in. from a 9 in. brick leaf : separation of concrete foundations is desirable but not essential and the two leaves must be united to form the stack under the roof just above an insulation course of asbestos cloth (see Fitzmaurice and Allen, *Op. cit. Fig.* 16). If one of the leaves has no fireplace, then buttressing can be by partitions as in Fig. 2.

Second, the front and back external walls must be considered with the party walls and here the problem is to *stiffen* adequately without the use of wall ties, so that there shall be a real separation of structure between the brickwork of adjoining houses. The method of stiffening is obviously to design breaks or bays which in fact act as small buttresses between which the windows extend. This is illustrated as a sketch in *Fig.* 2 and is obviously capable of

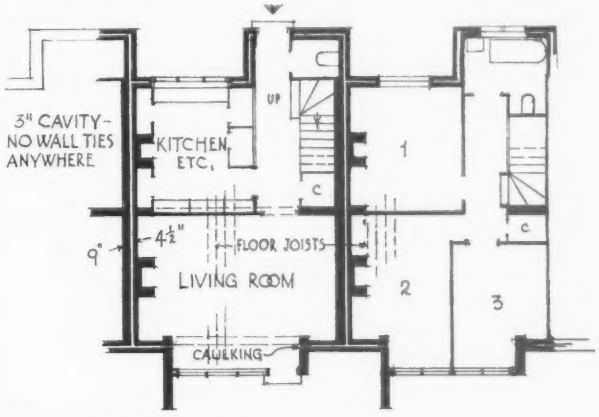

FIG. 2

variation. The principle to follow is that of lateral buttress walls giving different planes between which standard window panels could be fixed.

Third, project forward one lateral wall in each house bay to give a screen as between open windows in adjoining houses, as illustrated on the sketch or, alternatively, recess alternate bays in a row of house fronts as in the same figure. By these means some real reduction of loud-speaker noises in summer might be provided together with some extra privacy. It is to be noted that some of the modern staggered plans for housing, such as Miss Denby's All Europe House (R.I.B.A. JOURNAL, June 26 1939), does in fact provide some screening between windows. Casement windows of adjoining houses ought not to open towards each other, but open in parallel.

Other important points are to plaster the party wall, including the band at floor level corresponding to joist thickness, and also not to run floor joists into party wall but parallel to it, and supported on a spine wall or beam.

In detached country houses servants' quarters ought to be insulated owing to their wireless set. Also guests' rooms with telephones must not broadcast conversation all over the house and must therefore be baffled by a lobby and have adequate floor insulation, or close carpeting. This also applies to the nursery. Shallow joist floors, though they may be structurally safe, bend under furniture loads and tauten the ceiling beneath, giving noisy conditions (11 in. joists are desirable). Bathrooms and W.C.s must be planned over each other and not come over living rooms, because wood ceilings loaded with partitions tend to transmit noise. In addition segregate mechanical equipment—refrigerator, accelerator pumps, air compressors for vacuum cleaners—and keep them away from main structure.

The type of residential building consisting of converted maisonettes or new house with separate flat on second floor often gives serious noise complaints. The living room ought to be planned above living room, or above service unit and not above bedroom. Insulation of the wood floors is highly desirable. For this see last par. of section 14 below.

* The enterprising firm of builders of the Parkfield Estate, Swindon, have built experimental houses similar, but with party walls, in one case 9 in. single thickness, and in the other of two leaves, one 3½ in. separated by a 2 in. air space from a 9 in. leaf. The construction was concrete blocks without wall ties, and the leaves in both cases were stiffened by the fireplace jambs, and were united at a level within the roof space at an asbestos insulating layer. These were tested by B.R.S., and the increase in insulation of the double party wall over the 9 in. single party wall was 10 phons for airborne, 11 phons for impact noises.

8. Hospitals

In modern hospitals, owing to mechanical equipment and for other reasons, noise insulation has become a fundamental planning problem and is no longer incidental. A new problem has entered the modern hospital with the paying patient accommodated in the single bed ward. He is more exacting, not only because he must pay, but also because he is alone in the room and has plenty of opportunity to listen for transmitted noise. Also if paying patients are permitted loud-speakers, their rooms become themselves sources of noise. There is now a tendency to locate main kitchen on top floor to avoid expensive air extraction. But it is of first importance not to locate paying patients' rooms under the main kitchen floor because the main kitchen has a number of machines difficult to insulate structurally and the tiled floor causes high transmission of impact noises. It may be found useful to group the boiler-house containing oil burners, air compressors, accelerator pumps, in a part of the building having main kitchen and electrical treatment rooms above and to build that part in more massive brick structure, allowing ward block wings to be of lighter frame construction. Labour wards are also sources of noise and must be planned in small groups with a special lobby so that they are trapped from main corridor and they require double partitions between wards. Also the nurseries connected with labour wards must not occur opposite paying patients' rooms. Also the position of sluice rooms and ward kitchens, both of which are sources of noise, can greatly affect the amount of noise penetrating to beds. These ought not to give directly on to wards but must not be far away. A hospital main corridor is itself a source of noise and if fanlights open on to the main corridor from single bed wards complaints will be caused ; therefore the requirements of cross-ventilation for which the fanlight was designed must be weighed against noise nuisance. If loud-speakers are allowed in single bed wards there is an added reason for omitting fanlights to corridors. In addition the position of bedrooms for night nurses who must sleep by day must be considered. These must be grouped and defended by baffle lobbies from ordinary corridor noises. Also they must be defended against loud-speakers or gramophones in adjoining day nurses' or sisters' rooms. In the general planning of wards in hospitals on noisy sites the quiet side ought to be allocated if possible to surgical wards because ultra hygienic conditions are needed for surgical wards, whereas medical wards are now permitted some of the more hygienic kinds of sound-absorbing ceiling which can help to reduce traffic noises.

Hut Hospitals. Since these are mainly on ground floor acute problems do not arise, but yet planning can halve the noise risk. Service yard, boiler-house, pantries with potato peelers, transformer room, are sources of noise and must be segregated from wards. Single bed wards, for officers, must not come next ward kitchens, and sluice rooms require the same short distance removal from wards as in the case of permanent hospitals above noted.

A chief source of noise in all hut buildings is the long extent of boarded corridor which magnifies footsteps. Instead use lino on felt on concrete, or wood-block, or asphalt for corridors.

Rooms used by M.O.s for medical boards and rooms in clinics where patients are interviewed need to be defended against noise and must not have fanlights opening on to noisy corridors. These rooms require a hygienic sound-absorbent in the ceiling, both in the case of hut hospitals and permanent hospitals.

9. Hotels

The first need in hotels is to protect against heavy traffic noise, since they must often be noisily situated. This involves closed windows and air conditioning. But in any case plan best bedrooms on the quiet side. Since hotels illustrate problems of *acoustics and ventilation* in an extreme form, it may be well to summarise them at this point. It is of first importance to provide large ducts and slow air speeds in order to avoid noises of air-surge. This applies first to the main inlet shaft, as noted above ; and is specially important where the air enters at the top of a high building to avoid dust and smoke and goes downward in a shaft penetrating bedroom floors. Massive shaft walls are desirable. Also branch ducts in builders' work are less noisy than metal ducts. In the method of air-conditioning in which air crosses a room diagonally, hung ceilings are desirable to conceal the trunks and these ceilings if hung on felt-insulated hangers give some measure of floor sound-proofing. If air is extracted upwards into main plumbing shafts, then plumbing noises, due to the chute of water down a tall building, is liable to be a real nuisance, since they tend to escape into bedroom, through extract grilles unless baffles are placed behind grilles. In the method of air-conditioning in which air is introduced at ceiling level and extracted on same side a greater air velocity through inlets is required and precaution must be taken in the shape of directing vanes in mouths of ducts and gratings having rounded edges. But baffled trunks mean more powerful fans and plenty of head-room for large fans must be provided by the architect. The larger and slower a fan the less air surge and the less noise from rotating parts. Air-conditioning equipment with its pumps and washers is more easily insulated on basement floors where anti-vibration beds can efficiently dissociate rotating parts from structure. On upper floors the efficient structural insulation is much more difficult. Acceleration pumps, air compressors, refrigerators, pneumatic communication equipment, knife grinders, potato washers, bakery machinery, must be specified as silent and not put on party walls.

When an hotel building has been effectively protected from traffic noises the comparative quiet of bedrooms will make telephone conversations, snores, bathroom and plumbing noises, footsteps in corridors, more easily heard. Double partitions each 2½ ins. thick insulated at margins and not bridged by wall ties are necessary between bedrooms, or, alternatively, heavy single partition at least 40 lbs. per sq. ft. The single 2 in. partition with thin plaster coat will not insulate against snores. This applies with equal force to all hotel buildings and all flat buildings on quiet sites where there is no masking noise from familiar traffic. The same structural defence is necessary between bathroom and bathroom and between bathroom and plumbing shaft.

In residential hotels on quiet sites where bedrooms may become bed-sitting-room, in which wireless sets and gramophones may be found, the rooms require a baffle of cupboards, as in bed-sitting-room flats above, or else the equivalent of a 4½ in. wall. Even then some control of amplification by the management is desirable.

In all hotels lift shafts must be planned with a baffle of linen rooms between the lifts and bedrooms. Pantries with tile floors and communication bells can be very noisy at times and a lobby between them and the corridor is necessary. In large hotels ballrooms and lodge rooms must be planned so as not to disturb bedrooms. A ballroom on an internal court must have solid roofing structure or rigid double steel lay lights not penetrated by ventilation openings, so that the ballroom will then need separate ventilation. Lodge rooms ought not to have windows on small internal courts. For details of quiet equipment for hotels the student should consult the Noise Abatement League Leaflet No. 6 *Hotels.*

10. Schools and Colleges

These ought to have cloak rooms, lavatories, common rooms, gymnasium on the noisy side, and class-rooms away from traffic. Schools also have sources of interior noise which vitally influence planning. The gymnasium, the carpenter's shop, the hall and school stage or theatrical workshop are sources of noise. Among teaching rooms the art-room and geography room, where there is coming and going on a hard floor, are comparatively noisy and ought not to come over class rooms. The headmaster's rooms ought to be baffled by a lobby from the noisy vestibule or concourse.

In *technical schools*, the lecture rooms and laboratories must be separated from testing room, from workshops and from

kitchens with noisy oven doors. Where trades are taught it must be remembered that the joinery machine shop and metal working shop are very noisy indeed, and these shops must not come just opposite or adjoin lecture rooms.

In *schools of music* the lecture rooms and administration need to be segregated and defended from noise and also the music library and rooms used for examination. It is not possible to compose, or read scores, if strains of music filter in from outside. Also a clear distinction needs to be drawn between "practice rooms" and "teaching rooms," they ought not to adjoin. Practice rooms ought to be segregated and removed some distance, or placed on a noisy front, but need not be expensively insulated the one from the other because a student practising drowns out his neighbour's sounds. But teaching rooms, though often used for practising, need some quiet for personal tuition, and must be carefully insulated the one from the other structurally or by means of cupboards or lobbies arranged to form baffles.

11. Municipal Halls

Here two tendencies in modern planning are in conflict: the tendency to plan a greater and lesser hall communicating for social assemblies and at the same time to hire out these two halls separately for use at the same time. This presents great difficulties. A large double door or sliding partition between the two halls cannot in effect insulate powerful rehearsal noises. A small hall let to amateur players (now very common) allows of the knocking up of scenery which is very difficult to insulate and may interfere with concerts proceeding in the large hall: conversely, a concert rehearsal may penetrate a theatrical performance adjoining. Good planning will separate the halls entirely. By that means they can be let on a commercial basis. This principle ought also to be applied to 'Community Buildings.'

12. Hut and Camp Buildings

Here the same principles as for Hut Hospitals (above) must be applied in the matter of segregating sources of noise—service yards, kitchens, transformer and motor generator rooms, accelerator pumps, air compressors. Similarly defend administration and teaching rooms and medical officer's and inspection rooms. For hut dwellings note the need for two-leaf party walls as for houses (above), and in communication and access corridors the great value of a solid floor rather than a board and batten floor. For protecting dwellings and administration blocks from noise from adjoining open windows the principle of the projecting external screen wall between units, as for houses in rows (Fig. 2), can be developed and where casement windows are used they must not open towards each other. Some control of amplification of wireless sets is desirable. Games rooms, carpenters' shops, skittle alleys, gymnasia, assembly halls, are noisy and need to be grouped away from dwellings and teaching rooms.

13. Offices, Banks, Business Premises

Good evidence points to as much as 9 per cent. difference in efficiency for clerical workers as between quiet and noisy conditions in offices. The first cause of complaint, of exasperation, rises from trying to do business on the telephone in noisy general offices. Therefore grouping is necessary. It may take the form of placing those who buy and sell on the telephone in a relatively quiet room, or of taking the tabulating and punching machines out of the general office and isolating them. Again and again I have found the quiet rooms filled with stores that had a high habitable value, and unfortunate persons struggling along quite unnecessarily in the besieging uproar of the traffic. Where there is reading, dictation and verifying aloud, quiet is necessary. Thus, in banks, the calling of the ledgers will take a shorter time and mistakes be avoided in quiet conditions. The planning of secretaries' and managers' rooms, rest rooms and medical officers' rooms on the quiet side is an obvious advantage. When traffic noise is serious then air-conditioning and closed windows may be necessary. The top floor then has an advantage since it can be wholly top lit. In the case of auction rooms business can be seriously damaged if bids are not heard and an air-conditioning system with closed windows may be necessary on the street front. Auction rooms also present the extreme case for a *floor finish quiet underfoot* : but it applies in all offices. Such a floor finish can reduce footsteps and other noises in the same room, but will not *necessarily* reduce transmission to the floor below. The noisiest floor is a bare board and batten, or with "jointless" covering. Even rubber or cork on board and batten are inefficient; but are efficient if laid "on the solid." Wood block on the solid is much quieter (in the same room) than board and batten. Rubber and cork need to be thick, $\frac{3}{8}$in., to give cushioning action. A thin lino is useless, but a thick lino on a thin felt is quiet underfoot. In a general office gangways of rubber or cork can be usefully laid down. In monumental offices and banks rubber floors ought to replace the marble. (Note for details of quiet equipment, etc. *See* Noise Abatement League, Pamphlet No. 9. Reduction of Noise in Offices, Banks, Business Premises, etc.)

14. Design Points in Soundproof Construction

In specifying soundproof partitions for sets of adjoining rooms such as hotel bedrooms, one-room flats, hostels, clubs, it is not enough to consider only the partitions between rooms. *Flanking transmission* always occurs along the corridor wall and may make the "soundproof" partitions useless (see Fitzmaurice and Allen, *Op. Cit., Fig.* 2). Therefore provide double partitions but break the corridor partition at the cavity and mask the cavity by a fillet secured to one side only. Where existing rooms have to be treated in order to make them habitable it is possible to economise by treating thoroughly *every alternate room :* the treatment recommended in such cases is a wood framed lining to alternate rooms wedged up against glass silk, covering whole existing wall area but not nailed into it, and then finished with a fibre board, plastered $\frac{1}{4}$ in.; floor lino on felt. The principle of alternate room insulation can be applied in other cases. Where a high degree of sound-proofing is required, as in music teaching rooms, flanking transmission of floors and ceilings must always be considered and they must be built in dissociated units. Where pianos are in question the floor also is important.

Resistance to transmission of air-borne sounds of simple structures still depends primarily on their weight. This applies to walls, partitions, floors and to hollow block partitions. Cavity walls with wall ties are not better than solid walls of equal weight and in some cases may be less efficient.

The proper edge insulating of *Double Partitions* is difficult but necessary if advantage is to be had from them. They ought to act as diaphragms properly damped at their edges. Therefore ideally they ought not to rely for stability on sides and top fixings, but be able to stand alone like a $4\frac{1}{2}$ in. wall. The ability of an edge fixing to transmit the bending moments caused by vibration is a measure of its *inefficiency* in sound-proofing (Fitzmaurice and Allen). Therefore a double block partition ought to be just steadied against a fillet of cork or felt-covered batten at ceiling and cross walls and the bridging effect of plaster over angles must be avoided. If the partition is too light it will vibrate at shutting of doors. Therefore the factor of weight enters into double partitions as well as single walls. Another factor is the air coupling in cavities : the wider the cavity the better.

In respect of *Single Partition* an interesting fact, surmised from old buildings and recently tested in the laboratories, is the efficiency of stud and lath and plaster partitions, and for that reason Fitzmaurice and Allen have incorporated them in their sound-proofing of flats (*op. cit.*). The stud partition comes above the mass curve. The reason is probably connected with its inherent discontinuities. "Reductions of the order of 55 db (that of a 9 in. wall) have been obtained at the National Physical Laboratory for stud partitions faced on both sides with a 1 in. wall board of twisted wood shaving, bound with cement ('woodrock board' such as Thermacoust), the exposed faces being plastered with two coats of plaster. A similar facing to a staggered stud partition with felt isolation at the edges and between each set of studs gave a result only a few decibels higher. It should be noted that whilst stud partitions are more effective than single partitions of the same weight, on the average over the frequency

range, the improvement is chiefly at the high frequencies. There is little improvement at the low frequencies " (Davis and Morreau. Building Research Special Report. *Reduction of Noise in Buildings*, p. 19).

Since stud partitions are not specially effective at low frequencies they are of less use against musical tones, and are recommended rather for partitions within a house or flat unit than for party partitions and are not recommended for practice rooms. For loud low tones the mass of the 9 in. brick wall plastered, provides in my opinion the most reliable type.

In designing moderately sound-proof partitions *for private houses or maisonettes*, run the partitions parallel with joists and bring two joists close together but not touching. Along the gap between these joists fix a stud partition with sill spiked to one joist only; or a double light block partition without ties and with its cavity coming over the gap between the floor joists (see Fitzmaurice and Allen) illustrated *in Fig. 3*. Note the floor boards are, of course, broken in each case.

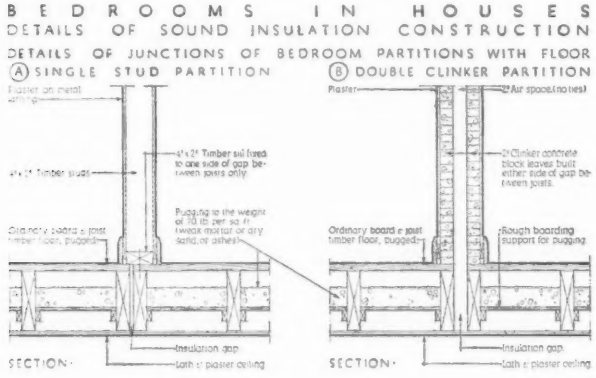

FIG. 3

(Reproduced by permission of H.M.S.O.) *(From Fitzmaurice & Allen)*

Floors.—The ordinary concrete or pot floor will of itself defend against air-borne noise but is almost transparent to impact noises. The chief requirement to-day is some inexpensive structural floor combination suitable for cheap flats and working-class dwellings. The 4½ in. " filler joist floor " is quite inefficient. In Fitzmaurice and Allen, *op. cit.*, a useful diagram is given on page 15 showing floors in order of sound-proof efficiency placed opposite the building type that requires that minimum degree of insulation. Any floor falling above that level on the diagram should be adequate, any falling below inadequate. Opposite and just above the Ministry of Health Departmental Committee's suggestions for working-class flats occur the following (and in each case the floor specified is taken as resting on an adequate structural floor): (1) A 2 in. concrete floating floor (or reinforced cement screed), on glass silk quilt covering whole structural floor. (2) Ditto, on eel grass quilt over whole structural floor. (3) Timber raft on 1 in. rubber cubes. Just below that level on the diagram occur " sheet rubber on sponge rubber finish " to the structural floor. The raft floors are illustrated with permission *in Fig.* 4. The floor covering to the floating concrete types can be taken as linoleum on a mastic. The illustrations show the defence against bug cracks, and also the very careful defence against edge transmission. It is *essential* that the floating portion shall not touch structure at margins. A still more efficient floating floor is the 2 in. cement screed on rubber cubes, also illustrated in the figure. This will carry partitions and is used in 'discontinuous construction.' The timber raft on rubber cubes is more efficient if loaded by some means as in the case of Messrs. Cullums' patent floor. It is clear that sound-proofing needs stronger structure throughout (see also section 6) if insulating elements and heavier partitions are to be carried. (2) The soundproof floors fall roughly into three degrees of efficiency. *Just efficient*, the carpet types—carpet finish, rubber, and linoleum on felt, here thickness of the cushioning layer is important. *Moderately efficient*, the true floating types. *Efficient*, the floating

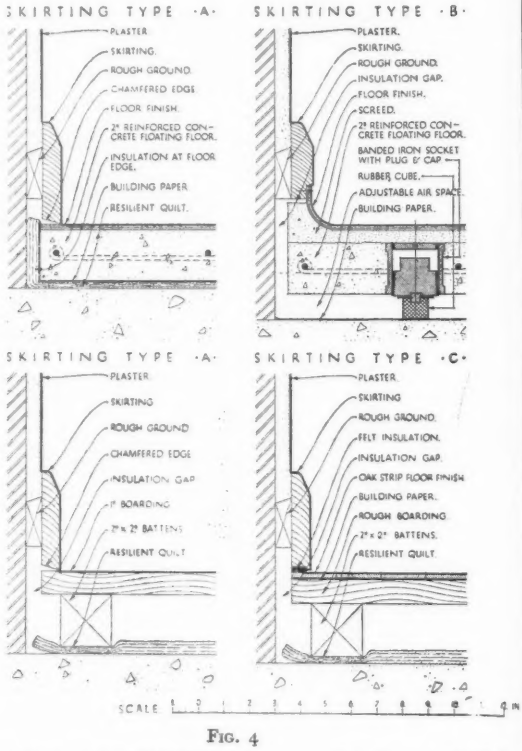

FIG. 4

(Reproduced by permission of H.M.S.O.) *(From Fitzmaurice & Allen)*

floors in combination with isolated ceiling. To these three might be added the high efficiency which can be achieved by special 'discontinuous construction' throughout the building. True isolated ceilings, hung up on felt insulated hangers or clips, are useful. If not insulated they can be negligible in their effect.

The insulating of timber floors has been illuminated by some recent tests. Pugging was found useful if it was at least 20 lbs. per sq. ft. in weight, that is to say about 3 ins. deep on wood trays between joists. It can consist of weak mortar, or dry sand, or ashes. An insulation gain of 5 phons was obtained. A greater efficiency was got by placing across the joists a raft floor of floor boards on 2 in. by 2 in. battens resting on glass silk blanket or eel grass quilt and not nailed through. Approximately a gain of 10 phons was got by that means. When pugging plus raft floor was used a gain of 15 phons was obtained. It should be noted that a practical difficulty arises in that the floating part of the floor is liable to dance and must not be nailed through. For rooms of moderate dimensions, however, this difficulty can be avoided by spiking the battens into a stout wood framing round the margins of the room but taking care not to wedge up against structure. This has been done successfully in small blocks of flats. The old method of separate ceiling joists below floor joists is also useful, but is more efficient if the ceiling joists have insulated bearings. In all cases thick lime and hair plaster is more efficient than wall board.

For notes on anti-impact floor finishes see above, section 13.

Book Reviews

SPECIFICATION PRACTICE IN U.S.A.

ARCHITECTURAL SPECIFICATIONS. *By Harold Reeve Sleeper, A.I.A. 4to, xiv+822 pp. New York: Wiley; London: Chapman & Hall. 1940. £3.*

Most intelligent architects will agree that their qualifications need to be somewhat different from those required by architects a few years ago. Whether we like it or not, the job of getting a building put up is one of ever-increasing complexity. Science has added to the materials available, to the amount of mechanical equipment and to the methods of construction, and with the best will in the world it is difficult for a busy architect to keep really up to date. One of the most serious handicaps to achieving this is the lack of easy methods of reference.

One essential stage in the construction of a building is the preparation of the specification. To many architects this is often a very painful business, but whether this need be so is a matter worth some consideration. So many specifications are needlessly long and so very wordy, whilst still being very vague. It would be worth considering the following four questions :— (1) What is the real object of a specification ? (2) For whose use is it written ? (3) Could it be shortened ? (4) Are there any indefinite phrases in it ?

Mr. Sleeper's book is, for the most part, an excellent model. Its general arrangement is clear and individual clauses are nearly always concisely worded and precise.

The book is divided into trade " Divisions," each with three or more general sub-divisions such as " Scope " of the work, " Materials " to be used, and " Fabrication and Erection." Each division has been prepared on the assumption that it would be used in conjunction with the printed " General Conditions " of the American Institute of Architects, and for this reason and also because it contains a number of unfamiliar terms it is not always directly applicable to English practice. In spite of this it should provide a most useful guide as it seems to be more up to date and more comprehensive than any other book on this subject. Incidentally it does not carry any advertisements.

Different print types are used to denote :

1. A choice of items where the user is to make a selection.
2. Blank lines to be filled in in accordance with job requirements.
3. Explanatory text not to be included in a specification.

The author suggests three ways of using the book. By using it as a " dummy," using a soft pencil to add and delete. The paper is specially chosen to allow of this process being repeated. Alternatively it is suggested that waxed paper can be placed on top of the text and notes written in position on this or, thirdly, the book can be used merely for reference. The first method will usually be the quickest.

It is not possible to comment in detail on a book containing over 800 pages of technical matter, but in general it appears that the author has managed to compile a tremendous amount of information almost all of which is remarkably up to date. On certain individual items it is possible to disagree and in some cases there seems to be a tendency to be too rigorous in the standards demanded. This latter point is one of some importance as it is a common failing in specifications. To demand an unreasonable standard on a few items and then to have to give way is to lay the whole of a specification open to criticism and abuse.

A very large number of materials and tests are described simply by reference to a Government standard. This at once makes the specification short and definite. One wonders how many British architects normally refer to British Standard Specifications—there are something like 100 of them which have a direct relation to building work. Many of these B.S.S. are a result of much research and careful thought, and reference to them would save time and make for efficiency. Incidentally, if such reference became general it would in the course of time drive out of business those firms producing materials not up to a reasonable standard.

Some of the text which is included only as comment is very useful. The section on sound insulation is a good example. Both this and the section on sound absorption are better than anything that has previously appeared in a book of this kind.

Quite apart from its very obvious value for specification writing it seems a book well worth studying simply to see how much can be learnt from customs normal to another country but little known over here. For the most part one would infer that American architects have studied the results of scientific research more thoroughly than we do in England and that having studied them they *use* them. This point does in fact strike one as being one of the most useful reactions obtained from the book and it would be interesting to know the reasons for the apparent difference in interest. The poor scientific background and education of the average architectural student in this country presumably has something to do with it. Also the reticence of Government Research Departments. The knowledge is there and the need so obvious that it is to be hoped that present and future students will somehow be given a better training. This book is admirable as a general reference. What is now required is a series of books dealing with materials and construction and planning (the three things are very difficult to separate) in a fundamental and scientific manner. One such book recently reviewed, " Sound Transmission in Buildings," was admirable in this respect. Many more are required, as also is some drastic alteration in the teaching methods employed in most architectural schools. It is high time we ceased to show a student a picture of a typical building construction detail saying " that is the way that job is done." He should be shown the problem and be given the method to find an answer. Until this type of teaching and thinking becomes general no book on specification writing or any other aspect of building will enable an architect to think clearly or to write clearly, and if he cannot do these things he is unlikely to design and very unlikely to build anything really worth while. C.C.H.

ECONOMY AND ORDER IN BUILDING EQUIPMENT SPECIFICATION

WARTIME BUILDING SUPPLIES : Schedule of Requirements for Government Building. *Min. of Works and Buildings. 2nd Edn., November 1940, cancelling 1st Edn. produced for official circulation only July 1940. H.M.S.O. 1s. net.*

The first publication from the Ministry of Works and Buildings is a useful " Schedule of Requirements in Wartime Building Supplies for Government Departments."

The schedule lists over 100 items of building equipment, door and window furniture, sanitary equipment, miscellaneous equipment such as towel rails and shelf brackets, and larger items such as plumbing fixtures, pipes, water tanks, etc. Each item is described with a statement of standard sizes, most are illustrated by simple drawings, and notes are added under three headings to show whether their use, and with what qualifications, is to be allowed in (*a*) permanent buildings, (*b*) semi-permanent, and (*c*) temporary buildings.

For example, for works under the authorities whose programmes are controlled by this memorandum, which includes all Ministries with building programmes, mortice locks are allowed in permanent buildings, but not in semi-permanent or temporary buildings. White glazed fireclay footbaths are allowed in permanent work, but cement formed *in situ* baths only in the semi-permanent and temporary work.

The use of the schedule is obvious, and it represents a welcome move to standardise and tidy up Government specification. It also provides a useful guide to practice for private and local authority architects.

PRECAUTIONS FOR CONCRETING AND BRICK-LAYING IN COLD WEATHER

It is very important that the cold weather of winter should cause the least possible delay to urgent building work. No one can say whether we shall have such weather this winter that special precautions will be needed. But if we have there will be no warning and preparations *must* therefore be made in advance. For this reason the Building Research Station of the Department of Scientific and Industrial Research has published a special Wartime Building Bulletin, No. 11 in the series, entitled " Precautions for Concreting and Bricklaying in Cold Weather " (H.M. Stationery Office, price 1s.).

Concreting and bricklaying are affected by cold weather in two principal ways :—

(*a*) The mixes harden more slowly than at normal temperatures.
(*b*) The water in mortar or concrete mixes may freeze.

What must be done to avoid trouble with concrete depends on how severe the conditions are, but for average winter weather simple precautions are enough. For instance, concreting should not be undertaken if the air temperature falls below certain limits, and when concreting has stopped the concrete should be covered and protected. Aggregates and mixing plants will need shelter.

For very urgent work which has to be carried on regardless of extremes of weather more drastic precautions are needed, and for these the Building Research Station has drawn largely on experience in Canada and the United States. For example, pre-heating of materials and the heating of equipment and formwork will be needed, and even after it is deposited concrete will often require heat during the initial stages of setting. Details of the equipment needed, and the temperatures to be worked to, are all given in the bulletin. A guide for the stripping of formwork is also given and notes on the use of calcium chloride are included.

Brickwork must be treated in much the same way as concrete, but special precautions in mixing and using mortars are mentioned.

GENERAL PRINCIPLES OF WARTIME BUILDING

The design and erection of a wartime building present a number of problems which do not arise in times of peace, and these are dealt with in Wartime Building Bulletin No. 10, just issued by the Department of Scientific and Industrial Research (H.M. Stationery Office, price 1s.). Since a building erected in wartime is presumably important in the war effort, the following factors override almost every other consideration :—

(*a*) *Concealment from the air.* It is not sufficient to design a building and its approaches and subsequently to apply a scheme of camouflage by paint or other means. Concealment should enter into every phase of the project—choice of site, layout, size of buildings, and method of construction.

(*b*) *The minimising of damage due to aerial bombardment.* For many types of structure even slight adaptations of design will protect them with some certainty against extensive damage by direct hits or near misses. Other types are by their nature liable to damage and should be avoided. The protection from fire of buildings where inflammable materials are handled or stored has to be reconsidered, since fires started by aerial bombardment are a great danger.

(*c*) *Economy in the use of materials.* The large demands on the building industry in wartime make it essential that all major structural materials should be used with the utmost economy. Again, this approach to economy starts at the design stage. The plan and layout of buildings, particularly the length of clear spans in larger buildings, affects the saving of material considerably. The designer should choose the type of construction which makes the most important saving of material while providing a building that satisfies requirements. Certain types which have obvious advantages in time of peace make too heavy demands on vital materials in wartime.

The bulletin explains, in one document, how to begin tackling these problems. It is intended to assist the designer in the preliminary stages of a wartime building project. Notes on concealment and the minimising of damage through air attack were contributed by technical branches of the Ministry of Home Security. Some suggestions on how to start saving timber are given in a section written by the Forest Products Research Laboratory of the Department of Scientific and Industrial Research. Information about economy in the use of the other materials was obtained while preparing earlier bulletins in this series. Slight modifications are made to the factory type designs in structural steelwork (Bulletins Nos. 1 and 4) to include recent recommendations made by the Research and Experiment Branch, Ministry of Home Security, based on the experience of recent air attacks.

Accessions to the Library

1940-41—I

Lists of all books, pamphlets, drawings and photographs presented to or purchased by the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists of reference.

Any notes which appear in the lists are published without prejudice to a further and more detailed criticism.

Books presented by the publishers for review marked R.
Books purchased marked P.
* *Books of which there is at least one copy in the Loan Library.*

ARCHITECTURE

YEAR BOOKS :

NOTTINGHAM, DERBY AND LINCOLN ARCHITECTURAL SOCIETY

MANCHESTER SOCIETY OF ARCHITECTS

ROYAL SOCIETY OF ULSTER ARCHITECTS

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS

EDUCATION

R.I.B.A.
[Examinations.] Questions set *etc.* (Intermediate, Final, Special Final.) (May, July.)
1940. 1s. each.

HISTORY

ANTIQUARIAN ITINERARY E.W. 72.03 (41/42)
The A— i—, comprising specimens of architecture, . . . in Great Britain. *Etc.* (W. Clarke & others, publ.)
7 vols. 12mo. on 8o. Lond. 1815-16.
Presented by Mr. H. W. Currey [*F.*].

72.03 (42) : 902.6
ROYAL COMMISSION ON HISTORICAL MONUMENTS, ENGLAND
An Inventory of the historical monuments *etc.* :—
72.03 (42.57 O) : 902.6
[Oxford.] The City of Oxford.
10¾". Lond. : H.M.S.O. 1939. £1 1s. R.

72.03 (42.1) : 902.6
COMMITTEE FOR THE SURVEY OF THE MEMORIALS OF GREATER LONDON *and* LONDON COUNTY COUNCIL
Survey of London.
711.722.4 (42.1) T
xx. The Parish of St. Martin-in-the-Fields, pt. iii : Trafalgar Square and neighbourhood. Sir George Gater and F. R. Hiorns.
11½". Lond. 1940. P. (by subscrn).

STEVENS (G. P.) 72.032.8 (38 A) : 726.1 P
The Setting of the Periclean Parthenon. (Athens : American School of Classical Studies at Athens : Hesperia, *journal*, suppt. iii.)
11½". [Princeton, N.J.] 1940. ($2.50.) R.

Drgs. box for MSS.
SUMMERSON (JOHN) 72.034 (42) .88 : 92 N
John Nash. *Etc.*
1935.
Annotated copy by the author, to 1940.
Presented by the Author [*A.*].

FEL[illegible] ( ), *Comte de* 72.034 (44) : 92 G
*Ange-Jacques Gabriel, premier architecte du roi, d'après des documents inédits.
40. Paris. 1912.
Specially bound copy.
Presented by Mr. Ronald P. Jones [F.].
Existing Reference Library copy to be transferred to Loan Library.
Drawings box (Spiers)

SPIERS (R. PHENÉ), *testimonial to* 72.036 (42) : 92 S
Richard P— S—, *etc.*—We, the undersigned architects, *etc.* [Memorial and signatures.]
Illuminated MS. & MS. signatures in a vol.
9 leaves. 15¾″. [1905.]
(Specially bound. In leather case.)
With reprn. of illuminated MS. (*from* Builder), Pl. *Repr.* 1905.
Presented by the Executors of the late Mr. A. H. Spiers, son of R. Phené Spiers.

PROFESSIONAL PRACTICE

R.I.B.A. × 72.08
Professional conduct and practice :
xi. 1938.
xii. (Apl.) 1939.
Index to notices . . . i to xii. 1939.
leaflets. 13″. Lond. 193—.

72.08] 33 : 940.6
GREAT BRITAIN : PARLIAMENT : COMMITTEES. SELECT COMMITTEE ON NATIONAL EXPENDITURE
699.895 : 698.1
Reports, *cont.* : 14th. [Camouflage.]
pam. 9¾″. Lond. : H.M.S.O. 1940. 2d.

KELLY (T.), *publ.* 72.083.121 (083.7)
K—'s Practical builder's price book, *etc.*
la. 8o. or narrow 4o. Lond. 1846.
With A copious extract of the Metropolitan Building Act, *etc.*, *separately paged.*
Presented by Mr. Harold W. Currey [*F.*].

72.089
OFFICE OF WORKS dupl. 699.895 : 72.025.1 arch file
Control of civil building and constructional operations. Notes for the guidance of applicants. [Licensing of building. With list of Licensing Officers.]
leaflet. 13″. Lond. 1940. R.

72.089 + 69.029 : 940.6
MINISTRY OF WORKS AND BUILDINGS, *formerly* OFFICE OF WORKS *etc.*, q.v.
Wartime building supplies. Schedule of requirements for government departments. [Fittings.]
2nd ed. (Nov.) (Cancelling 1st ed. [by ? Ministry of Supply] of July 1940.)
13″. Lond. : H.M.S.O. 1940. 1s. R.
1st ed. not in Library.

BUILDING TYPES
(CIVIL)

UNITED STATES *government* 725.1 (73) + 725 : 354 (73)
Public buildings : a survey of architecture of projects . . . by . . . governmental bodies between . . . 1933 and 1939 *etc.* By C. W. Short and R. Stanley-Brown.
11¾″. xxiii + 697 pp. Washington : Supt. of Documents. 1939. ($2.50.) R.

MINERS' WELFARE COMMISSION
Miners' welfare, 1939. Annual report [on 1939].
[1940.] 1s. 6d. R.

NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS
Transactions of the 25th annual conference and proceedings of the 40th annual general meeting [1939].
[1939.] R.

725.75 (73)
GEORGIA (U.S.), *state* : STATE PLANNING BOARD *and others*
Report on organised camping in Georgia *etc.*
dupl. typescript. 11″. n.p. 1940.
Presented by the Board.

725.75 : 699.895 folder
ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS : EVACUATION COMMITTEE
Evacuation : the under fives. Fourth Report by the . . . Committee.
dupl. typescript in loose printed folder. 10″. [1940.] 6d. R.

725.75 : 699.895 folder + 699.895 : 725.92 : 728
ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS : HOUSING COMMITTEE
Report on re-housing the homeless and evacuation.
dupl. typescript. 13″. 1940. R.
With Summary of report.

725.75 + 727.1] 699.895
HULL : CITY OF H— COLLEGE OF ARTS AND CRAFTS : SCHOOL OF ARCHITECTURE
Scalby reception centre, Yorkshire. . . . Research programme . . . by students *etc.* (*From* Architects' Journal, 29 Aug.)
pam. 12½″. n.p. [1940.] R.

MINISTRY OF HEALTH 725.75 : 699.895
[Evacuation : mothers and children.] (Circular 2170.) *Also* Press notice : More assistance *etc.*
. . . Boots and clothing for evacuated children. (Circular 2168.)
3 dupl. typescripts. 9½″, 13″. 1940. R.
[Evacuation : mothers and children.] (Circular 2178.)
pam. 8½″. [Lond.] 1940. R.

(RELIGIOUS)

BATSFORD (HARRY) *and* FRY (CHARLES) 726.5/7 (42)
The Greater English church of the middle ages. (British heritage series.)
8½″. viii + 136 pp. + pls. Lond. : Batsford. 1940. 7s. 6d. R.

CENTRAL COUNCIL (OF DIOCESAN ADVISORY COMMITTEES) FOR THE CARE OF CHURCHES
The Care of churches : *etc.* 8th report [on 1938-40].
Lond. : Ch. Assembly, Press & Pubns. Board. 1940. 2s. 6d. R.

KENNINGTON : ST. AGNES'S CHURCH 726.54 (42.16 K)
S. A—', K— Park. Some notes and sketches and . . . appeal.
pam. 9¾″. n.p. [1938 or -39.]
Presented (2).

Lethaby colln. (Schultz) pfo.
LETHABY (W. R.) 726.54 (42.44 B) [72.08 : 608.375
Brockhampton church [Herefs]. [Specifn.]
typescript & MS. 13″, 13¼″. 1901.
Presented by Mr. R. Schultz Weir.

P. (W. F.). shelved 726.6 (44.38 S)
The Strasbourg Cathedral during five hundred years. [*Article in* American Society of the Legion of Honor, Legion of Honor Magazine (*or* A— S— L— of H— M—), xi, No. 1 (Summer), p. 13.]
10″. New York. 1940. R.

(EDUCATIONAL)

727.1
PENNSYLVANIA, *Commonwealth* : DEPARTMENT OF PUBLIC INSTRUCTION
The School plant. Rules and regulations *etc.* (Bulletin 86.)
pam. 9″. Harrisburg. 1939. R.

ROBINSON (G. A.) 727.4 : 729.9
The Equipping of modern technical colleges.—Paper read *etc.* 1932. (Association of Technical Institutions.)
pam. 8½″. Loughborough : Hon. Secy. [1932 or after.] 6d. P.

NOBBS (P. E.) 727.71 + 727 + 725.4] 696.92
An Ideal north lighting system applicable to picture galleries, museums, studios, workshops and laboratories.
pam. 8½″. + folding pl. priv. prin. [1934.]
Presented by the Author [*F.*].

(DOMESTIC)

BRAUN (HUGH) 728.03 (42)
The Story of the English house. (British heritage series.)
8¾″. xii + 116 pp. + pls. Lond. : Batsford. 1940. 10s. 6d. R.

PEATE (IORWERTH C.) 728.03 (429)
The Welsh house. A study in folk culture. (Honourable Society of Cymmrodorion : Y Cymmrodor *series*, xlvii.)
8½″. xviii + 232 pp. + pls., some folded. Lond. 1940. 15s. R.

AYSCOUGH (ANTHONY), *phot.* 728.034 (42 + 41.5).77
Country house baroque. Photographs of eighteenth century ornament, mostly stucco-work, in English and Irish . . . houses *etc.*, by A— A— . . . text by M. Jourdain.
9½″. (xviii) pp. + 45 pls. Lond. : Heywood Hill. 1940. 12s. 6d. R.

MYERSCOUGH-WALKER (R.) 728.036.6
Choosing a modern house.
10″. 16 pp. + 80 pls. Lond. : The Studio. [1939 or -40.] 6s. R.

728.1 + 711
ASSOCIATION FOR EDUCATION IN CITIZENSHIP *and* GARDEN CITIES AND TOWN PLANNING ASSOCIATION
Houses, towns and countryside. Drafted by Elizabeth E. Halton *etc.*
pam. 8½″. Lond. 1939. 6d. R.

UNITED STATES HOUSING AUTHORITY 728.1 (73)
Summary of standards and requirements for U.S.H.A.-aided projects.
dupl. typescript. 10½″. n.p. [1940.] R.

MINISTRY OF HEALTH 728.1 : 333.32
Housing Acts, 1935 and 1936, Housing (Rural Workers) Act, and Small Dwellings Acquisition Acts. Interest on loans, etc. (Circular 2205.)
leaflet. 9¾″. Lond. : H.M.S.O. 1940. 1d. R.

728.1 : 34 (492)
NEW YORK : FEDERAL WORKS AGENCY—WORK PROJECTS ADMINISTRATION : DIVISION OF FOREIGN HOUSING STUDIES
Housing laws of the Netherlands. Legislative series ii, issue No. 1. The original housing law with amendments and supplemental provisions. (Bibliographies and indices of special subjects, *etc.*) (New York City Housing Authority.)
dupl. typescript. 11″. New York. 1939. R.

SUMMERSON (JOHN) 728.81 (42)
English castles. (Peacock colour books.)
9¾″. 24 pp. + xi pls. Lond. : Collins. [1939 or -40.] R.
(*by Messrs. Adprint, Ltd., the producers*).

DETAILS, FITTINGS

729.331.3
CENTRE INTERNATIONAL DES INSTITUTS DE RECHERCHE (INTERNATIONAL INSTITUTE OF INTELLECTUAL COOPERATION)
Recherche, ? *journal*. No. 1. Le Problème de l'ogive. [By Henri Focillon and others.]
9½″. [Paris.] 1939. R.

WAGNER (A. R.) 729.9 : 929.6
Heralds and heraldry in the middle ages : An inquiry. *Etc.*
8¾″. x + 157 pp. Oxford & Lond. O.U.P. 1939. 10s. 6d. R.

ALLIED ARTS AND ARCHÆOLOGY

SARGANT-FLORENCE (M.) 7.018
Colour co-ordination.
8½″. 352 pp. + folding front. Lond. : John Lane. 1940. 15s. R.

TOMBLEY (*Mrs.* C. G.) 749
Furnishing your home. A practical guide *etc.*
8½″. (xx) + 244 pp. + pls. Lond. : Geo. Allen & Unwin. 1940. 8s. 6d. R.

75.036 (42) : 92 T (064)
NORWICH : CASTLE MUSEUM AND ART GALLERIES
Catalogue of loan exhibition of pictures . . . of John Thirtle of the Norwich school 1777-1839.
pam. 7¼″. Norwich. 1939. R.

SOCIÉTÉ FRANÇAISE D'ARCHÉOLOGIE
Congrès archéologique de France : cie session, . . . L'Allier. 1939. R.

PALESTINE : DEPARTMENT OF ANTIQUITIES
The Quarterly. Vol. viii : index. 1939. R.
Vol. x : No. 1. 1940. R.
Vol. ix, Nos. 2-4, said to be delayed in publication.

BUILDING SCIENCE

WARLAND (E. G.) 69
Building construction for national certificate.
Vol. ii (second year course).
8½″. Lond. : English Univs. Press. 1939. 6s. R.
Vol. iii (third year course).
8½″. Lond. 1940. 6s. 6d. R.
Vol. i, 1938, already in Library.

NEW ZEALAND STANDARDS INSTITUTE 69 (083.74) (931)
The N— Z— S— I—. Its origin, objects, and organisation. *Etc.* By A. R. Galbraith.
13½″. (iv) + 34 pp. n.p. 1939. R.

MANSON (J. L.) 69 : 5/6
Experimental building science.
Vol. i : Introduction *etc.*
2nd ed. 8¾″. Camb. : U.P. 1940. 6s. R.

CEMENT AND CONCRETE ASSOCIATION 69 : 940.6 box
Build in war time, *later* War time building. (Numbered T. 1-26, *etc.* Some are in 2 eds. Some are on backs of other numbers.)
various leaflets. [1940.] R.
See MS. list attached to leaflets.

STRUCTURAL ELEMENTS

Inf. file 69.021.13/15
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH : BUILDING RESEARCH
Soil mechanics—the science of foundations and earthworks.
pam. typescript. 13″. [1940.] R.

DAVIDSON (D. M. J.) 69.025.3 + 698.7
Floors and floorings. (Lockwood's Modern handbooks.)
7½″. viii + 84 pp. Lond. 1939. 3s. 6d. R.

STRUCTURAL MECHANICS

INSTITUTION OF STRUCTURAL ENGINEERS
Constitution of council for . . . 1940-1941. 1940. R.

PRACTICE AND INDUSTRY

DIRECTORY OF CONTRACTORS
The —— *etc.* 1940. C. W. Biggar, ed. [1940.] 17s. 6d. R.

NATIONAL JOINT COUNCIL FOR THE BUILDING INDUSTRY
Review of wages. (23 Sept.) 1940. R.

69.08 : 331.2
Interim wage adjustment.
leaflet. 13″. 1940. R.

69.08 : 331.81 : 389.22
Notice to adherent bodies *etc.* [on the effect of extension of summer time].
leaflet. 4½″. 1940. R.

MATERIALS

JOHNSON (J. B.) 691 : 620.1
J—'s Materials of construction.
8th ed. By M. O. Withey and James Ashton.
9″. xxii + 867 + (iv, interspd.) pp. New York : John Wiley ; Lond. : Chapman & Hall. 1939. £1 16s. R.

D.S.I.R. : ATMOSPHERIC POLLUTION
The Investigation of atmospheric pollution. Report on . . . year ended 31st March 1939 (25th).
1940. 2s. 6d. R.

691.11 : 634.98
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH : FOREST PRODUCTS RESEARCH
Bulletins :
691.11 : 620.193.82
No. 19. Beetles injurious to timber and furniture. [Replacing Forestry Commission, Bulletin No. 9, 1928 and 1932.]
pam. 9½″. Lond. : H.M.S.O. 1940. 1s. 6d. R.

D.S.I.R. : BUILDING RESEARCH 69 : 940.6 Arch file
Wartime building bulletins :
691.54+691.47]940.6 + 711.7 : 625.74 + 69.022 + 691.55 + 69.057.5
No. 9. Conservation of cement and of clay bricks. [Alternative materials ; road surfaces, walls, plasters, and shuttering.]
11″. Lond. : H.M.S.O. 1940. 1s. R.

HEATON (NOEL) 691.598
Outlines of paint technology. (Based on Hurst [(G. H.)], Painters' colours, oils and varnishes.)
2nd ed. 9″. x + 413 + (4, interspd.) pp. + table, folded + front. + vi pls. Lond. : Chas. Griffin. 1940. £1 5s. R.

PILKINGTON *Bros., Ltd.* 691.6 (085)
Cathedral and figured rolled glass.
11″. 55 pp. (incl. pls.) + mounted glass specimens in folding cover. St. Helens. [1940.] R.

691.714 : 940.6
MINISTRY OF SUPPLY : IRON AND STEEL CONTROL
Distribution of steel supplies.
Revised ed. pam. 9½″. Lond. 1940. R.

CONSTRUCTION

BRITISH STANDARDS INSTITUTION 69 (083.74)
British standard specifications. War emergency. B.s.s. :—
693.068.39
No. 417 . . . for galvanised mild steel cisterns, tanks and cylinders. Revised ed. 1940. 2s. R.

KNOOP (DOUGLAS) *and* JONES (G. P.) 693.1 : 366.1
A Short history of freemasonry to 1730.
7¼″. ix + 148 pp. Manchester : U.P. 1940. 5s. R.

SANITARY SCIENCE AND EQUIPMENT, PROOFING

MINISTRY OF HEALTH 696.1 : 614] 699.878
[Mosquitoes.] Memorandum on measures for the control of mosquito nuisances in Great Britain. By J. A. Sinton and P. G. Shute. (Memo. 238/Med.)
pam. 9¾″. Lond. : H.M.S.O. 1940. 6d. R.

R.I.B.A. Inf. file 696.1 : 620.193.17
Protection of water supply plumbing in roofs against frost.
dupl. typescript. 13″. [1939.]

JAMES (G. V.) 696.11 : 628.1
Water treatment. *Etc.*
9¾″. xi + 224 pp + pls., some folding. Lond. : Technical Press. 1940. £1 10s. R.

INSTITUTION OF ELECTRICAL ENGINEERS 026 [696.6 : 621.3 (42)
Catalogue of the lending library.
Reprint [? of an earlier ed.] 8½″. 122 pp. Lond. [? 1935 or after] (1940).
Presented by the Librarian.

Inf. file 697 : 662.5/9] 016
ASSOCIATION OF SPECIAL LIBRARIES AND INFORMATION BUREAUX
Aslib War-time guides to British sources of specialised information : No. 1. Fuel and allied interests (excluding electricity).
dupl. typescript. 13″. 1940. 2s. 6d. to non-members. R.

697.9 : 016
U.S.S.R. : NARODNII KOMISSARIAT PO STROITEL'STVY [NATIONAL COMMISSION FOR BUILDING] : TSENTRAL'NAIA STROITEL'NAIA BIBLIOTEKA [CENTRAL BUILDING LIBRARY]
Konditsionirovanie vozdykha [air conditioning].
8½″. 64 pp. Moscow : Govt. Archit. Pubrs., Academy of Architecture. 1940.
Presented by the Bureau of Technical Information of the Construction Industry, Central Technical Library, at the All-Union Permanent Construction Exhibition.

BRITISH STANDARDS INSTITUTION 69 (083.74)
B. s. s. :
698.9 : 621.57
No. 922 . . . for domestic electrical refrigerators.
1940. 2s. R.

MARKS (PERCY L.) 699.844
Acoustics. *Etc.*
8½″. xvi—(ii) + 143 pp. Lond. : Technical Press. 1940. 7s. 6d. R.

(A.R.P., WAR DAMAGE)

LEE (D. H.) 699.895
Design and construction of air-raid shelters in accordance with the Civil Defence Act, 1939, *etc.* (Concrete series.)
9½″. viii + 86 pp. Lond. : Concrete Pubns. [1940.] 8s. 6d. R.

TOWN PLANNING INSTITUTE 699.895 : 711
Report on planning for air-raid protection. (*From* Jnl., Sept.)
pam. 11″. Lond. 1939. R.

699.895 : 72.025.1 Arch file
BUILDING SOCIETIES ASSOCIATION
699.895 : 72.025.1 : 347.23
War damage.
Booklet No. 2. Claims procedure and explanatory notes on Landlord and Tenant (War Damage) Act, 1939.
pam. 8½″. Lond. [1939 or -40.] R.

699.895 : 72.025.1 : 347.434
War damage.
Memorandum . . . in connection with the Government compensation scheme.
pam. 8½″. Lond. [1939 or -40.] R.

699.895 : 72.025.1 : 347.434
TREASURY : COMMITTEE ON THE PRINCIPLES OF ASSESSMENT OF DAMAGE
War damage to property.—Government compensation scheme. Reports :
First.
Reprint. 1939 (1940). 2d.

DAVEY (REGINALD) 699.895 : 72.025.1 : 347.434
Compensation under the Defence Acts.
6″×4¾″. 94 pp. Lond. : Estates Gazette. 1940. 4s. 9d. R.

699.895 : 72.025.1 Arch file
MINISTRY OF HEALTH
699.895 : 72.025.1] 69.059.2
Repair of war damage. (Circular 2144.)
leaflet. dupl. typescript. 13″. 1940. R.

699.895 : 72.025.1] 696.11
Purity of water supplies [air-raid damage to mains]. (Circular 2172.)
leaflet. dupl. typescript. 9½″. 1940. R.

699.895 : 72.025.1 Arch file
TURKEY, *government* 699.895 : 72.025.1] 711.4 : 34
Décret *etc.*—Règlement relatif aux conditions de défense passive qui doivent être appliquées pour l'établissement des plans des villes et la désignation de l'emplacement des bâtiments importants. (Décret No. 2/13510 *etc.*)
typescript. 13″. 1940.
Presented by the Foreign Office.

699.895 : 72.025.1 Arch file
R.I.B.A. 699.895 : 72.025.1] 72.083.4
Fees for the repair of war damage.
dupl. typescript. 13″. 1939.

699.895 : 72.025.1 Arch file
699.895 : 72.025.1] 72.083.4
CHARTERED SURVEYORS' INSTITUTION
The Assessment of war damage to property. Professional charges.
leaflet. 8¼″. [Lond.] 1940. R.

699.895 : 72.025.1 Arch file
MINISTRY OF HEALTH
699.895 : 72.025.1] 725.1
War damage to buildings and plant belonging to local authorities and public utility undertakings. (Circular 2118.)
dupl. typescript. leaflet. 13″. 1940. R.

699.895 : 72.025.1] 725.511
[War damage to hospitals.] Emergency hospital scheme. W— d— to h—. (Circular 2021.)
pam. dupl. typescript. 13″. Lond. 1940. R.

699.895 : 72.025.1] 728 [72.08 : 336.211
[War damage to houses : payment of rates.] (Circular 2215.)
leaflet. dupl. typescript. 13″. 1940. R.

699.895 : 725.4
MINISTRY OF HOME SECURITY : [A.R.P. DEPARTMENT]
Emergency protection in factories. (A.R.P. Memorandum No. 16.)
pam. 8½″. Lond. 1940. 1d. R.

MINISTRY OF HEALTH 699.895 : 725.92 : 728 Arch file
[Emergency air-raid rehousing.] (Circular 2156.) [Repair of unoccupied houses.]
leaflet. dupl. typescript. 9½″. 1940. R.

[Emergency rest centres for persons unhoused by air raids. Appeal.] (Circular 2147.) (*Also* Press notices.)
leaflets. dupl. typescript. v. sizes. 1940. R.

[Emergency air-raid rehousing.] (Circular 2156.) [Licensing of use of unoccupied houses.] (Sept.)
leaflet. dupl. typescript. 9½″. 1940. R.

[Emergency (air-raid) rehousing.] Persons rendered homeless by enemy attack. (Circular 2159.)

[——. Rent excess.] (Circular 2164.)
2 leaflets. dupl. typescript. 9½″. 1940. R.
With Press notices.

[Emergency rest centres for persons unhoused by air raids.] Person rendered homeless by enemy attack. (Circular 2180.)
leaflet. dupl. typescript. 9½″. 1940.

Accommodation for homeless persons. (Circular 2185.) [Furnishing of unoccupied houses.] (Oct.)
leaflet. dupl. typescript. 8¾″. 1940. R.

699.895 : 725.92 : 728] 699.895
[Emergency rest centres : air raid protection.] (Circular 2219.)
leaflet. dupl. typescript. 8¾″. 1940. R.

TOPOGRAPHY

REDDAWAY (T. F.) 91 (42.1) : 7.034 (42).5
The Rebuilding of London after the Great Fire.
8¾″. 333 pp. + pls., some folding. Lond. : Cape. 1940. 18s. R.

Issue desk

GEOGRAPHIA, *Ltd.* 91 (42.1) : 711.7 : 41.311
Complete list of L.C.C. street name changes [1936-39].—"Geographia" supplement.
pam. 6¾″. Lond. [1938.] 6d. *Presented.*

COTTERELL (T. STURGE) 912 (42.38 B)
Historic map of Bath *etc.* (Corporation of the City of Bath : Spa Committee.)
8¾″. (v) + (ii) + 33 pls. + folding map. Bath. [1939.] R.

TOWN AND COUNTRY PLANNING, GARDENS, RURAL PRESERVATION

TENNESSEE, *state* : STATE PLANNING COMMISSION 711 : 34 (73)
Planning and zoning legislation in Tennessee.
Reprint. 11″. (vi) + 53 pp. Nashville. 1940.
Presented by the Commission.

MUMFORD (LEWIS) 711.4—162 (969 H)
A Memorandum report on park and city planning [Honolulu], *internal title.* (Whither Honolulu? *cover title.*) (Honolulu, city and county : Park Board.)
9″. (viii) + 67 pp. n.p. [1939.] R.

GARDEN CITIES AND TOWN PLANNING ASSOCIATION 711.454
Royal Commission on the Geographical Distribution of the Industrial Population. Evidence of the G— C— and T— P— A— [1938].
12¾″. 44 pp. Lond. [1938 or -39.] R.

712.21 (73) + 725.7/8 (73)
ARKANSAS, *state* : STATE PLANNING BOARD *and others*
Park, parkway and recreational area survey. Report *etc.*
11″. 110 pp. incl. pls. Little Rock, Arkansas. 1940.
Presented by the Board.

712.21 (73) + 725.7/8 (73)
FLORIDA, *state* : STATE PLANNING BOARD *and others*
Summaries of the park, parkway and recreational area study . . . for Florida.
14″. 95 pp. + maps, etc. (some folding). n.p. [1939.]
Presented by the Board

712.21 (73) + 725.7/8 (73)
GEORGIA (U.S.), *state* : STATE PLANNING BOARD *and others*
Report on outdoor recreation in Georgia *etc.*
dupl. typescript. 12½″. 1939.
Presented by the Board.

712.21 (73) + 725.7/8 (73)
IDAHO, *state* : STATE FORESTRY DEPARTMENT *and others*
A Preliminary report on the parks, parkways and recreational areas of Idaho.
dupl. typescript. 10½″ n.p. 1939.
Presented by the Department.

712.21 (73) + 725.7/8 (73)
ILLINOIS, *state* : DEPARTMENT OF PUBLIC WORKS AND BUILDINGS—DIVISION OF STATE PARKS *and others*
Illinois park, parkway and recreational area plan.
12″. 143 pp. + front. + vii maps (folded). Chicago. 1938. ($1.50.)
Presented by the Department.

712.21 (73) + 725.7/8 (73)
INDIANA, *state* : RECREATION STUDY COMMITTEE
Indiana recreation study report.
dupl. typescript. 11″. 1938. R.
Presented by the Committee.

712.21 (73) + 725.7/8 (73)
MISSISSIPPI, *state* : STATE PLANNING COMMISSION *and* UNITED STATES : NATIONAL PARK SERVICE
Tentative final report of the park, parkway, and recreational-area study. Mississippi.
dupl. typescript. 11″. n.p. 1938.
Presented by the Commission.

712.21 (73) + 725.7/8 (73)
NEW JERSEY, *state* : STATE PLANNING BOARD
Where shall we play? A report on the outdoor recreational needs of N— J—.
11″. (x) + 39 pp. incl. folding pl. n.p. 1938.
Presented by the Board.

712.21 (73) + 725.7/8 (73)
SOUTH CAROLINA, *state* : STATE COMMISSION OF FORESTRY *and others*
Park, parkway and recreational-area study of South Carolina. Preliminary report *etc.*
dupl. typescript. 11″. n.p. 1938.
Imperfect : lacking map and photographs.
Presented by the Commission.

712.21 (73) + 725.7/8 (73)
TENNESSEE, *state* : STATE PLANNING COMMISSION
The Park, parkway and recreational-area study of Tennessee. A preliminary report *etc.* (Bulletin No. 15.)
11″. 20 pp. + folding map. Nashville. 1939.
Presented by the Commission.

FRESNO, *California, city* 712.21 (73 F) + 725.7/8 (73 F
Recreation survey . . . with recommendations for city schools and municipal playgrounds. By E. C. Kratt, S. L. Glass, and A. C. White.
dupl. typescript. 11″. 1939.
Presented by the City authorities.

CAMBRIDGE PRESERVATION SOCIETY
[Annual report, *etc.*, on year 1939-June 1940.]
folded leaflet. [1940.] R.

CARDIFF CIVIC SOCIETY
Annual report : 6th, [for] 1938-9.
[1939 or -40.] R.

DUPLICATES, &c.

Also 1 *vol., duplicate, to Loan Liby.*
Presented by Mr. H. W. Currey [F.]

DRAWINGS, PRINTS, &c.

Lithotints, collection
[Plates from VILLA-AMIL & ESCOSURA, España *etc.*, and other works, unidentified; text leaves with liths. from ROBERTS (D.), Egypt and the Holy Land.]
18 sheets *lith.*, 8 text leaves. [18—.]

Engravings, etc., collection
Abbey : Westminster. Simonau (G.); *lith.* Churches (parish) : Barfreston, Blore (E.) and Twopeny (W.); *woodcut*;—Doncaster, Weightman (J. G.), del., Neale (J. P.) and Fenner (R.), sc.; 1828. Hotel : Lond. Bge. Stn., Currey (H.), archt. *Ph. of W.C.D.* House (town) : Rome, Pal. Farnese, Piranesi ([G. B.]), sc. *etching.* Temple : Bangalore. Daniell (T.) *aqua., col.*—All exts.
6 sheets. v.d.

LONDON : ST. PAUL'S CATHEDRAL
Ext. from S.E., ? del. and sc. [? 17—]; secn. thro' dome, Gwyn (J. and Wale (S.), del. 1801; int. of crossing, Coney (J.) del. [18—].
3 sheets. *Eng.* v.d.
—All presented by Mr. Harold W. Currey [F.]

LETHABY (W. R.), *architect or designer*
[Works.]
c. 199 sheets. *D., etc.* 1893, c. 1901, and n.d.

LETHABY (W. R.), *del.*
Staircase : Rouen. *Penc. D.* n.d.
Sketch-book. 1 vol. n.d.

LONDON : ST. MARY LE BOW CHURCH
——. Tower. Meas. D. Christopher (J. T.), mens. and del. Le Keux (J. H.), sc.
Eng. [1881 or before.]
—All presented by Mr. R. Schultz Weir.

BRODRICK (CUTHBERT), 1821-1905, *architect or designer*
[Works.]
69 sheets. *D., etc.* 1863. [1—8.]

MANCHESTER : ASSIZE COURTS
[? Exec'd. design by A. Waterhouse.] Int. *W.C.D.* [18—.]

LONDON : NATIONAL GALLERY
[Exec'd. design by W. Wilkins.] View from S.E. *W.C.D.* [18—.]

[? BROADRICK (CUTHBERT)], *del.*
Temple : Rome, Pantheon. Ext. *W.C.D.* [18—.]
[? Cath., Abbey.] Int. of E. end. *Ink D.* [18—.]
—All presented by Mr. H. Trevor Field, of Hull, through Mr. Dudley Harbron [F.].

PORTRAIT
[Unidentified.] *W.C.D.* [? 18—.] *Presented.*

LONDON : ST. PAUL'S CATHEDRAL
N.W. (Bell) Tower. Elev., secn. Williams (R.), del.
2 sheets. *Ink D.*, 1 *col.* 1888.
Presented by Mrs. M. T. Symons, daughter of draughtsman.

KITSON (S. D.), *del.*
Sketch-books. (1 Greek, 1 mediæval, architecture.)
5 vols. [18—.]
Presented by Miss Elizabeth and Miss Barbara Kitson.

EWING (H. M.), *del.*
Measured drawings :—
Abbey : Kirkstall, plan ; nave bay, *Ink & penc. D.*, 1915. Churches (parish) : Linlithgow, nave bay, 3 sheets *D.* 1913 ; London, St. Stephen Walbrook, 2 sheets *Ink D.* 1912 ; March, Cambs., 11 sheets *Ink D.* 1912 ; Nun Monkton, W. porch, *Ink D.* 1911. Collegiate ch. bdg. : Wells, Vicars' Close chapel, *Ink D.* 1913. House (country), Craigiehall Ho., Midlothian, doorway, *Penc. & Mono. D.* 1912. Street archre. : Edinburgh, Parliament Sq. (E. end), elev., *Penc. D.* 19—. —Arabesque, armorial shaft (both renaiss.), 2 sheets, *Mono. D.*
23 sheets. (2 rolls.) 19—.
Presented by the draughtsman.

WEBB (*Sir* ASTON), *architect*
Victoria and Albert Museum, London. Working D. ; views, T. Raffles Davison, del.
Var. sheets. (2 rolls.) *D.* [189— — 190–.]
Presented by Mr. Edward Playne [A.] and Mrs. Maurice Webb.

WEBB (EDWARD), *father of Sir Aston Webb, del.*
[Sketches of buildings and landscapes, some unidentified.] Exts. 10 sheets, *W.C.D.* ; 3 sheets on 1, *Sepia D.* ; 26 sheets, *sepia crayon D.* ; 2 sheets, *Penc. D.* (one 1840) ; 5 sheets, *Black crayon D.*, 1844-48.

WEBB (*Sir* ASTON), *del.*
[Sketches of bgs. and landscapes.] (Continental.) Exts.
4 sheets. *W.C.D.* [? 18—.]

DRAWINGS (MISC.), SMALL
[Caricature of diner, Sir W. Orpen del., *Ink & ink wash D.* ; sketch portrait of Sir R. Blomfield, ? Sir A. Webb del., *Ink D.* ; s.p. of Sir E. Lutyens, ? del., 1921, *Penc. & wash D.* ; Biarritz, view, ? del., *Penc. D.* ; (village), ? del., *W.C.D.*
4 sheets. v.d.

ENGRAVINGS
—— (English subjects.) 25 sheets. *Eng.* 18—.
—— (Continental subjects.) 9 sheets. *Eng.* n.d.
—All presented by Mrs. Maurice Webb, through Mr. Edward Playne [A.].

TEMPLES : EGYPTIAN
—— : Esneh ; Ombos. Ints. R. Phené Spiers, del.
2 sheets. *W.C.D.* [18—.]
Presented by the Executors of the late Mr. A. H. Spiers, son of the draughtsman.

LONDON
British Gallery, Pall Mall (now demold.) [1819] : order, elev. C. J. Richardson, del.
Penc. & mono. D. [18—.]
Haymarket Theatre : portico, end elev. and cross secn. [? Jas. Winston, del.]
2 sheets. *Col. D.* [18—.]
—Both presented by Mr. J. L. Douthwaite, Guildhall Librarian.

PRESENTED BY MR. A. R. CONDER [*F.*]

BÖTTICHER (ADOLF) 72.032.8 (38 A) : 711.421.3
*Die Akropolis von Athen *etc.*
la. 8o. Berlin. 1888. *To Loan Library.*

RICHARDSON (C. J.) 72.034 (42).3 + 729.098.034 (42).3
The Workman's guide to the study of old English architecture, *etc.*
fo. Lond. 1845.

MARSH, YETTS & MILNER, *firm* 725.25 (42.16) : 017.3
. . . The Hop and Malt Exchange, . . . Southwark, *etc.* [Sale catalogue, with illus.]
First edition, *page heading.* fo. Lond. 1874.

SURVEYOR-GENERAL OF PRISONS * 725.6 (42.1)
Report . . . on . . . Pentonville Prison, 1844.
la. 8o. Lond. 1844.

DENSHAM (W.) *and* OGLE (J.) 726.52 : 285.8 (42.33)
The Story of the Congregational churches of Dorset, *etc.* [Including architectural information.]
8¼″. n.p. '1999' [1899].

BAILY (CHARLES) 728 : 694.1
*Remarks on timber houses.
narrow 4o. Lond. 1869. *To Loan Library.*

GIBBS (JAMES) 729.321
*Rules for drawing the several parts of architecture, *etc.*
fo. Lond. 1732. *To Loan Library.*

7.03 (494) : 064 (494)
[? GENEVA] : EXPOSITION NATIONALE SUISSE
L'Art ancien à l'Exposition *etc.* Album illustré . . . supplément au Catalogue du groupe 25, *cover title.*
pfo. fo. Geneva. 1896.
No title-page. Imperfect : 54 *plates only, including two unnumbered, but excluding a duplicate.*

SAUERLANDT (MAX) 73.032.8
*Griechische bildwerke. (Blauen bücher.)
10½″. Düsseldorf & Leipzig. 1908.
To Reference Library. [1910] ed. already in Reference and Loan Libraries.

SAUERLANDT (MAX) 73.033.4/5 (43)
*Deutsche plastik des mittelalters. (Blauen bücher.)
10½″. Düsseldorf & Leipzig. [1909.]
(*Bound after* Griechische bildwerke, 1908.)
To Reference Library. [1910] ed. already in Loan Library.

DAVIS (FREDERICK) 902.6 : 7.032.7 (42.27 S)
*The Romano-British City of Silchester. (*From* Bygone Hampshire [? editor].)
8o. Lond. 1898. *To Loan Library.*

91 (42.64 W)
TITCOMBE (J. C.) + 728.84 (42.64 S)
An Illustrated Seckford history, (ancient and modern,) *etc.* [Seckford Hall, Great Bealings, Suffolk, and buildings of his foundation in ? Woodbridge.]
9¾″. Woodbridge. [1900.]

DUPLICATES

Also 4 *works, duplicates, added to Loan Library.*

Correspondence

7 Heath Mansions,
Hampstead, N.W.3
21.12.40

To the Editor, JOURNAL R.I.B.A.

SIR,—I very much appreciated your obituary note on Graham Laidler in your issue of the 16th, for its discerning summary of "Pont's" amazing endowment ; "draughtsmanship based on an innate richness of spirit" seems to me to hit the mark to a miracle ! That richness of spirit, I have often thought, might have been evinced through "letters" if he had so chosen, to which his "legends" bear full testimony.

If there is anyone who could draw a full-length portrait of the man, with a photograph, I think it would interest many readers and stand for a record of one whom it is so sad to have gone from us.

Yours faithfully,
H. B. CRESWELL [*F.*]

MEMBERS SERVING WITH THE FORCES

This eleventh list of members serving with the Forces includes only the names of members whose *rank and unit* have been notified to the R.I.B.A. It is impossible to guarantee complete accuracy. We shall be glad to receive corrections and additions. Promotions notified to the R.I.B.A. are recorded. For much of this information we cannot be dependent on the serving members themselves and so must rely on the kindness of their friends and relations.

DECORATION

MANSER, H. A. [*L.*], 2nd-Lieut. Awarded the George Medal. (2nd-Lieut. Manser has since been killed.)

KILLED ON ACTIVE SERVICE

GILES, M. J. [*Student*], Pilot-Officer R.A.F.
JOHNSTON, J. B. [*A.*].
SMITH, G. A. W. [*L.*], Lieut. R.E.
TOOTH, D. R. N. [*A.*], R.A.F.

UNITS AND RANKS OF SERVING MEMBERS

ALAWAY, K. H. M. [*Student*], A.C.2, R.A.F.V.R.
ALLEYN, JUSTIN H. [*A.*], Capt. General List.
ALTHAM, C. J. [*Student*], Spr. R.E.
ANNAND, GEORGE [*A.*], L/Cpl. R.E.
ARCHER, B. S. TREVELYAN [*A.*], 2nd-Lieut. R.E.
ARTHUR, P. R. [*A.*], Spr. R.E.
ARUNDEL, KENNETH [*Student*], Cpl. R.E.
ASH, A. S. [*F.*], Capt. Staff Officer.
BAILEY, DUNCAN [*Student*], Pte. R.A.O.C.
BAILEY, H. [*Student*], Gnr. R.A.
BAKER, L. F. [*A.*], O. Cadet R.E.
BERNEAUD, H. C. [*Student*], 2nd-Lieut. R.A.
BERRIDGE, C. W. [*A.*], 2nd-Lieut. R.E.
BLYTHIN, C. F. [*A.*], Lieut. R.E.
BRIGHTLING, S. C. [*A.*], L/Cpl. R.E.
BROOKHOLDING-JONES, ADRIAN [*A.*], Ord. Seaman R.N.
BRUER, L. G. [*A.*], Major 2nd A.I.F.
BUBB, J. S. [*A.*], Gnr. R.A.
BULLIMORE, GILBERT [*A.*], Gnr. R.A.
CAMPBELL, J. I. [*A.*], Spr. R.E.
CHARLES, G. V. [*A.*], L/Bdr. R.A.
CHIDLEY, L. C. [*A.*], A.C.2 R.A.F.
CLARK, J. N. [*A.*], Gnr. R.A.
COOKE-YARBOROUGH, M. H. [*A.*], L.A.C. R.A.F.
COOPER, E. P. [*L.*], Maj. Pioneer Corps.
CRAIG, D. M. [*A.*], A.C.2 R.A.F.
CROSBEE, E. H. [*A.*], Spr. R.E.
CROSS, W. E. [*F.*], Lieut. R.E.
DAVIDSON, J. W. [*Student*], Spr. Cadet R.E.
DEWEY, A. C. [*A.*], Spr. R.E.
DUNCAN-JONES, A. W. H. [*Student*], Ord. Seaman R.N.
ELDER, ALBERT J. [*A.*], L/Bdr. R.A.
FAIRWEATHER, G. H. [*A.*], 2nd-Lieut. R.E.
FERGUSON, PERCY [*A.*], Spr. R.E.
FLOYD, J. P. [*A.*], Spr. R.E.
FOX, H. LESLIE [*F.*], Lieut. R.E.
FULLER, A. R. [*Student*], 2nd-Lieut. R.A.
GLOAG, H. L. [*Student*], 2nd-Lieut. R.E.
GOLDFINCH, DONALD A. [*A.*], Capt. R.E. D.C.R.E.
GRAY, CHARLES W. [*L.*], Lieut. Assistant Sub-Area Quartering Commandant, Scottish Command.
GROSVENOR, H. N. W. [*A.*], A.C.2 R.A.F.
HAMMOND, J. E. [*L.*], 2nd-Lieut. R.A.
HARLAND, MICHAEL [*A.*], Pilot R.A.A.F.
HARRISON, JOHN M. [*A.*], 2nd-Lieut. R.E.
HARTLEY, PAUL H. [*Student*], Pilot u/t R.A.F.
HAVERS, NORMAN [*Student*], 2nd-Lieut. Dorset Regt.
HEATHCOTE, C. [*Student*], Pte. R.A.S.C.
HEMINGWAY, R. [*Student*], Pte. R.A.P.C.
HENNIKER, R. [*A.*], Lieut. R.E.
HEWITSON, T. T. [*A.*], Gnr. R.A.
HILLMAN, W. [*Student*], 2nd-Lieut. R.A.
HIRD, J. G. [*A.*], L/Cpl. R.E.
HOLE, W. E. [*Student*], A.C.2 R.A.F.
HOLLOWAY, S. M. [*Student*], Cpl. R.A.F.
HOOPER, E. M. [*A.*], A.C.2 R.A.F.
HORLOCK, L. [*Student*], Pte. East Surrey Regt.
HURRY, W. ROY [*A.*], Spr. R.E.
JOHNSON, F. W. [*Student*], Sergt. R.A.
JUDD, G. W. [*Student*], L/Bdr. R.A.
KENT, PETER [*Student*], Gnr. R.A.
LENNON, J. D. [*Student*], Lieut. R.E.
LEVIE, W. E. [*A.*], Gnr. R.A.
LISTER, M. H. [*Student*], Spr. R.E.
LISTER, N. [*Student*], Spr. R.E.
LUDLOW, B. G. [*Student*], Gnr. R.A.
LYON, G. W. [*A.*], A.C.2 R.A.F.
MACHIN, N. C. [*A.*], A/Sergt. Instr. R.E.
MACKAY, HARRY [*A.*], Maj. R.E.
MARSHALL, A. T. [*A.*], Spr. R.E.
MARTIN, W. A. [*Student*], Spr. R.E.
MASON, H. C. [*F.*], Maj. R.E.
MEDD, D. L. [*Student*], Gnr. R.A.
METAYERS, H. A. [*A.*], Lieut. R.E.
MILLER, E. J. [*Student*], Gnr. R.A.
MILLER, T. H. [*Student*], Spr. R.E.
MORRIS, L. C. [*Student*], L/Cpl. Oxford & Bucks L.I.
MORRISON, F. A. [*A.*], Spr. R.E.
PARRY, M. H. [*Student*], L.A.C. R.A.F.
PHILLIPS, R. A. [*A.*], Lieut. R.E.
PICKEN, I. D. F. [*A.*], 2nd-Lieut. R.A.
PICKERING, J. W. [*A.*], Tpr. R.A.C.
PILDITCH, P. H. [*F.*], Maj. R.A.
PRICE, ERIC J. [*Student*], Cadet R.A.
PRINGLE, GORDON [*A.*], Capt. R.E.
RANK, J. S. [*A.*], Sig., Royal Corps of Signals.
SALAMAN, E. D. P. [*A.*], Lieut. R.N.V.R.
SARGISON, V. J. [*A.*], Spr. R.E.
SAVILL, A. G. [*A.*], Capt. Royal Ulster Rifles.
SCOTT, G. P. [*A.*], Capt. R.E.
SCOTT, WILLIAM [*A.*], Lieut. R.E.
SEIFERT, R. [*A.*], Lieut. R.E.
SELBY, L. J. [*A.*], Spr. R.E.
SHIRES, G. R. [*A.*], Capt. R.E.
SMITH, F. G. [*Student*], Cadet H.A.C.
SOULSBY, J. P. F. [*Student*], Pte. R.A.M.C.
STARLING, L. B. [*A.*], Gnr. R.A.
STEEL, GEORGE [*Student*], Spr. R.E.
STIFF, J. A. [*A.*], A.C.2 R.A.F.V.R.
STINSON, WILLIAM [*Student*], Gnr. R.A.
TATAM, R. [*A.*], Lieut. R.E.
THOMSON, T. F. [*L.*], 2nd-Lieut. R.E.
THORN, F. W. [*A.*], Pte. K.O.Y.L.I.
TITHERLEY, PHILIP [*A.*], Trpr. Royal Tank Regt.
TOLHURST, A. J. M. [*A.*], Maj. R.E.
TURNER, F. A. [*A.*], Tpr. R.A.C.
TUTHILL, W. F. [*L.*], Capt. R.A.
VINING, J. N. RANDALL [*F.*], Maj. R.E.
WALTHO, GEOFFREY [*A.*], 2nd-Lieut. R.E.
WARMAN, K. [*A.*], A.C.2 R.A.F.
WATSON, J. F. [*A.*], Spr. R.E.
WETHERELL, JOHN R. [*L.*], Lieut. R.E.
WHITE, H. H. [*Student*], Gnr. R.A.
WHYMAN, G. P. [*A.*], Spr. R.E.
WILKIE, R. G. [*Student*], Tpr. R.A.C.
WILLARS, F. L. [*A.*], A.C.1 R.A.F.V.R.
WILSON, H. F. [*Student*], Gnr. R.A.
WILSON, W. G. [*A.*], L/Bdr. R.A.
WRITER, A. [*Student*], Gnr. R.A.
WYLIE, A. B. [*A.*], Cadet R.E.
WYNNE-THOMAS, D. [*F.*], Capt. Queen's Own Royal West Kent Regt.

Notes

NEW YEAR'S HONOURS

Mr. F. Dorrington-Ward [*F.*], government architect, P.W.D., Singapore, and Mr. John Wilson [*F.*], architect to the Scottish Board of Works, have been awarded the O.B.E. (Civil Division) in the New Year's Honours.

PROFESSOR RICHARDSON

Professor A. E. Richardson, A.R.A., has been elected an Honorary Fellow of St. Catherine's College, Cambridge, and has received the degree of M.A. *Honoris Causa.*

APPOINTMENTS VACANT

Mr. A. J. Wood [*F.*], now engaged as a technically qualified quantity surveyor on Home Defence Works Services, Eastern Command, notifies us that architects who are experienced in quantity surveying or quantity surveyors are now urgently required at headquarters.

Members who may be interested should state age, experience, qualifications, whether British nationality and state when available and salary required.

The work is of a temporary nature, and salaries would be from £30 to £40 per month according to qualifications. Applications may be addressed to :

A. J. WOOD, Esq., F.R.I.B.A.,
Surveyor of Works for Home Defence, c/o Commander Royal Engineers, 44 Parkside, Cambridge

or to :

MAJOR L. J. B. TOVEY, O.B.E.,
Surveyor of Works, R.E., H.D.W.S., Headquarters, Eastern Command, Ashford, Middlesex

REGISTRATION ACT AMENDMENT

The following Amendment to Regulation 26 of the Architects' Registration Council has been submitted for approval to the Privy Council :—

REGULATION MADE IN PURSUANCE OF SECTION 13 OF THE ARCHITECTS (REGISTRATION) ACT, 1931, AMENDING THE EXISTING REGULATIONS.

Amendment to Regulation 26

Add the following paragraph at the end of the Regulation :— "or (6) if he was in the Armed Forces of the Crown (other than the Home Guard) at any time between 1 January and 1 August 1940, provided that he applies for registration within six months after demobilisation or discharge and provided also that he would have been qualified for admission under Section 2 of the Architects Registration Act 1938, or under paragraph (2) or (5) of this Regulation if he had made application before 1 August 1940."

This amendment extends the period after qualification during which an applicant in H.M. Forces can apply for registration.

Membership Lists

ELECTION : JANUARY 1941

The following candidates for membership were elected in January 1941 :—

AS FELLOWS (4)

CARTER : PETER GEORGE JEFFERY [*A.* 1926].

PEAT : JOHN TREVOR WILLIAMS [*A.* 1934].

And the following Licentiates who are qualified under Section IV, Clause 4 (*c*) (ii), of the Supplemental Charter of 1925 :—

BINNS : HENRY WILLIAM, F.S.I.

WRIGHT : ALEXANDER, Glasgow.

AS ASSOCIATES (20)

ALLEN : THEOPHILUS PHILIP.

BROWN : DANIEL MACLAREN, Port Elizabeth, South Africa.

CATHERY : EDMUND LAURIE.

CROOK : PETER HOWE, Eastbourne.

DOBSON : GRAEME GIBSON, Dip.Arch.(Distinction)(L'pool), Auchterarder.

GARROD : ANTHONY ROLAND.

HENDERSON : JAMES MURIE, Uddingston.

HYDE : LEONARD ARTHUR, Coventry.

KEARSLEY : EDMUND DONALD, Huddersfield.

LEMON : ARTHUR LYALL CHISHOLM, Stonehaven.

LE ROITH : HAROLD HERSCH, B.Arch., Johannesburg, South Africa.

MARSHALL : EDWARD WELDON, Warminster.

MURPHY : FRANK FINBAR, B.Arch., Cork.

PARKER : ROBERT SPENCER, B.Arch.Rand, Salisbury, S. Rhodesia.

PASCALL : CLIVE .

PAUL : WILLIAM FRANCIS EDWARD, Bristol.

STERN : MILTON FREDERICK, B.A. (Arch.), Muizenberg, Cape, South Africa.

THORROLD-JAGGARD : WILLIAM, Palmerston North, New Zealand.

WARD : KENNETH, South Milford.

WRIGHT : JACK HERBERT.

AS LICENTIATES (7)

BELL : ALFRED PHILLIPSON, Liverpool.

FENDICK : JACK RONALD, Stratford-on-Avon.

GILBERT : RONALD LETHIEULLIER.

IRWIN : GEORGE FRANCIS.

LORD : HAROLD KINGSTON, Ramsey, Isle of Man.

SMITH : FREDERICK ARTHUR, Leicester.

WRIGHT : RALPH, Carlisle.

ELECTION : FEBRUARY 1941

An election of candidates for membership will take place in February 1941. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Byelaws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Thursday, 23 January.

The names following the applicant's address are those of his proposers.

AS HON. FELLOW (1)

CHURCHILL : THE RIGHT HON. WINSTON SPENCER, P.C., C.H., M.P., Prime Minister and Minister of Defence, 10 Downing Street, S.W.1. Proposed by the Council.

AS FELLOWS (4)

GALE : ARTHUR HARRY [*A.* 1931], "Alexandra House," 135 Bow Road, E.3 ; "Mont Fleuri," 248 Osborne Road, Hornchurch, Essex. C. Kennard, G. Mackenzie Trench and Wm. A. Ross.

ILLINGWORTH : ARTHUR JOHN ALEXANDER [*A.* 1922], Ministry of Health, No. 7 South Western Region, 3, Woodland Road, Bristol, 8 ; Wolverton House, 10 Clifton Park, Bristol, 8. I. B. Pite, D. G. McIntosh and Archd. Scott.

O'RORKE : EDWARD BRIAN, M.A. (Camb.), R.D.I., N.R.D. [*A.* 1931], 4 Golden Square, W.1 ; Rock House, River Common, Petworth, Sussex. Howard Robertson, John Murray Easton and R. E. Enthoven.

RITCHIE : THOMAS [*A.* 1926], 82 Woodstock Road, Chiswick, W.4. C. S. White, Joseph Addison and Sydney Tatchell.

AS ASSOCIATES (9)

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

BAILEY : HERBERT GEORGE [Passed a qualifying Examination approved by the R.A.I.A.], "Loch Sloy," Green Lane, Northwood, Middlesex. Prof. Alfred S. Hook, Prof. Leslie Wilkinson, W. R. Richardson, and applying for nomination by the Council under the provisions of Byelaw 3 (*d*).

CAPON : CHARLES KENNETH, A.A.Dipl. [Arch. Assoc.], 4 Gray's Inn Square, W.C.1. G. A. Jellicoe, C. Lovett Gill and C. S. White.

CROWE : RALPH VERNON [Arch. Assoc.], 23 Middleton House, Causton Street, S.W.1. C. S. White, John Murray Easton and Howard Robertson.

DYSON : DONALD LEATHLEY [Leeds School], 4 Halcyon Hill, Chapel Allerton, Leeds, 7. Applying for nomination by the Council under the provisions of Bye law 3 (*d*).

HOLLAND : RALPH BERTRAM [Arch. Assoc.], c/o Westminster Bank, 1 Melbury Court, Kensington Road, W.8. G. A. Jellicoe, C. Lovett Gill and John Murray Easton.

NASH : PHILIP BERTRAM, Dip.Arch.Leeds [Leeds School], 10 Cedar Mount, Huddersfield. A. Ernest Shennan, L. H. Keay and R. Ainsley Threadgold.

SMITH : MISS SUSAN BABINGTON [Arch. Assoc.], c/o The Architectural Association, 36 Bedford Square, W.C.1. G. A. Jellicoe, C. Lovett Gill and R. E. Enthoven.

WHATLEY : MISS JOAN [Arch. Assoc.], Ty Gwyn, Treflach, nr. Oswestry, Shropshire. G. A. Jellicoe, C. S. White and L. H. Bucknell.

WIDDUP : FRANK MACFARLANE, Dip.Arch.(Distinction)[Leeds School], "Lansdowne," Coates, Barnoldswick, via Colne. Applying for nomination by the Council under the provisions of Byelaw 3 (*d*).

AS LICENTIATES (4)

BEECH : WILLIAM, Manchester Collieries, Walkden ; Adelhurst, Ringley Road, Radcliffe, Lancs. Harry S. Fairhurst and the President and Hon. Secretary of the Manchester Society of Architects under Byelaw 3 (*d*).

BUTTLE : ARTHUR, c/o Messrs. W. G. Couldrey & Son, 14 Palace Avenue, Paignton ; "Chalet Rose," Hookhills Grove. Goodrington, Paignton. Major W. N. Couldrey, J. Leighton Fouracre and J. C. C. Bruce.

REID : JAMES BRADBURN HOUSE, 68 Northumberland Street, Newcastle-upon-Tyne, 1 ; 38 Regent Road, Gosforth, Newcastle-upon-Tyne, 3. P. H. Thoms and the President and Hon. Secretary of the Northern Arch. Assoc. under Byelaw 3 (*d*).

RUTTER : JOHN WILLIAM, Architects Office, Borough Engineer's Dept. Town Hall, Sunderland; 24 Grange View, Sunderland. Applying for nomination by the Council under Byelaw 3 (*d*).

ELECTION : APRIL 1941

An election of candidates for membership will take place in April 1941. The names and addresses of the overseas candidates, with the names of their proposers, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary R.I.B.A. not later than Monday, 7 April 1941.

The names following the applicant's address are those of his proposers.

The name of a school, or schools, after a candidate's name indicates the passing of a recognised course.

AS ASSOCIATES (3)

BENNETT : ROBERT COLIN COSMO [Passed a qualifying Examination approved by the I.S.A.A.], 287 Davenport Road, Durban, South Africa. G. T. Hurst, J. Wallace Paton and Ernest M. Powers.

CALLAHAN : ROBERT CHARLES [Passed a qualifying Examination approved by the I.S.A.A.], 34 Buckingham Road, Port Elizabeth,

South Africa. Wm. J. McWilliams, Victor T. Jones and F. Owen Eaton.

JENNINGS : LIEUT. CYRIL OSWALD, R.E. [Special Final], Chief Engineer's Office, Fort Canning, Singapore, S.S. C. W. Box, T. J. Rushton and D. C. Rae.

Notices

THE USE OF TITLES BY MEMBERS OF THE ROYAL INSTITUTE

In view of the passing of the Architects Registration Act, 1938, members whose names are on the Statutory Register are advised to make use simply of the title "Chartered Architect" after the R.I.B.A. affix. The description "Registered Architect" is no longer necessary.

The attention of members is also drawn to Counsel's opinion on the use of the affixes F., A. and L.R.I.B.A. by unregistered persons printed on page 190 of the June issue of the JOURNAL.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election they should send the necessary nomination forms to the Secretary R.I.B.A. as soon as possible.

ANNUAL SUBSCRIPITONS

Members' subscriptions, Students' and Subscribers' contributions became due on 1 January 1941.

The amounts are as follows :—

Fellows	£5 5 0
Associates	£3 3 0
Licentiates	£3 3 0
Students	£1 1 0
Subscribers	£1 1 0

NOTE.—By a resolution of the Council dated 20 July 1931 the subscriptions of R.I.B.A. members in the transoceanic Dominions who are also members of Allied Societies in those Dominions are reduced to the following amounts as from 1 January 1932 :—

Fellows	£3 3 0
Associates	£2 2 0
Licentiates	£2 2 0

Members who are already registered under the Architects' Registration Act 1931 are reminded that the annual renewal fee of 10s. became due on 1 January 1941, and should be forwarded DIRECT to the *Registrar, The Architects' Registration Council*, 68 Portland Place, W.1.

COMPOSITION OF SUBSCRIPTIONS FOR LIFE MEMBERSHIP

Fellows, Associates and Licentiates of the Royal Institute may become Life Members by compounding their respective annual subscriptions on the following basis :—

For a Fellow by a payment of £73 10s. (70 guineas).

For an Associate or Licentiate by a payment of £44 2s. (42 guineas), with a further payment of £29 8s. (28 guineas) on being admitted as a Fellow.

In the case of members in the transoceanic Dominions who are members of Allied Societies in those Dominions, the following basis will operate :—

For a Fellow by a payment of £52 10s. (50 guineas).

For an Associate or Licentiate by a payment of £31 10s. (30 guineas), with a further payment of £21 (20 guineas) on being admitted as a Fellow.

Provided always that in the case of a Fellow or Associate the above compositions are to be reduced by £1 1s. per annum for every completed year of membership of the Royal Institute after the first five years, and in the case of a Licentiate by £1 1s. per annum for every completed year of membership of the Royal Institute, with a minimum composition of £6 6s. in the case of Fellows and £4 4s. in the case of Associates and Licentiates.

PUBLICITY

The Practice Committee recommend members to see that when writing or approving an article or descriptive note for the Press, technical or otherwise, relating to a completed building, the names of the quantity surveyor and contractor are always mentioned.

THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46, Cannon Street, London, E.C.4.

Competitions

COMPETITION FOR DESIGN FOR PAVILION NATIONAL EISTEDDFOD OF WALES—COLWYN BAY. 1941

The Council of the National Eisteddfod offer prizes of £75 and £25 for competitive designs for a standardised pavilion to seat 12,000 with the necessary stage and other accommodation.

The intention is to encourage the planning and design of a modern type of building that can be taken down, transported and re-erected from year to year in various centres.

The Council of the National Eisteddfod have appointed as adjudicators Mr. Percy E. Thomas [*P.P.*] and Mr. T. Alwyn Lloyd [*F.*]. The conditions drawn up by them can be supplied to those who apply to the Secretary, Eisteddfod Office, Colwyn Bay, before 1 March 1941.

COMPETITION RESULTS

BEDFORD : SHIRE HALL AND TOWN HALL

Shire Hall Competition : Mr. Oswald P. Milne [*F.*].

Town Hall Competition : Messrs. Harvey & Wicks.

The "A.B.S." Optional Policy

FOR CIVILIANS OR MEMBERS OF CIVIL DEFENCE ORGANISATIONS

(1) Covers "HOME" WAR RISKS without extra premium.

(2) Gives the MAXIMUM AMOUNT OF COVER for the minimum amount of premium.

(3) IS ADAPTABLE to meet changing circumstances.

EXAMPLES OF PREMIUM FOR £1,000 OPTIONAL POLICY

Age next birthday	*Monthly Premium*
35	£1 16 6
40	£2 3 0
45	£2 11 5

Write or 'phone for particulars to : The Secretary, A.B.S. Insurance Department, 66 Portland Place, W.1. Tel. : Welbeck 5721.

MEMBERS' COLUMN

CHANGES OF ADDRESS

MR. C. V. K. KENNEDY [*Student*], Registered Architect, has removed his address from 6 Earls Avenue, Plymouth, to "Clynton," Carkeel, Saltash, Cornwall, as from 1 January 1941.

MESSRS. KNAPP-FISHER, POWELL & RUSSELL have moved their offices to 32 Theobald's Road, W.C. Tel. : Holborn 3130.

MESSRS. HARRY W. WEEDON [*F.*] and Partners, are transferring their practice to 129 Lordswood Road, Harborne, Birmingham, 17. (Telephone, provisional at present ; please ask Directory enquiries.)

THE practice of Messrs. Alder, Turrill & Danvers has ceased for the duration of the war. Any correspondence should be sent to St. Martin's House, 49 St. Ann Street, Salisbury.

ACCOMMODATION, TEMPORARY OR PERMANENT

FELLOW with offices in Manchester Square offers another architect a small office. Telephone, etc., or address only and will forward letters or messages. Very moderate terms.—Box 2712, c/o Secretary R.I.B.A.

RESIGNED PARTNERSHIP

MR. S. E. DUNCAN [*L.*] has resigned his partnership with Messrs. W. N. Thomson & Co., 52 Leith Walk, Edinburgh, with the intention of resuming practice in Edinburgh on his own account after the cessation of hostilities.

COPIES OF THE "BUILDER" WANTED

COPIES of the issues of the "Builder" for 6 January 1900 and 6 January 1906 are urgently required by a Learned Society. Anyone who has these copies to dispose of is requested to write to the Secretary, R.I.B.A., 66 Portland Place, W.1.